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ORMER HOME OF F. LEWIS CLARK, SPOKANE. THE MOST BEAUTIFUL GROUNDS IN SPOKANE, WASH.

KEITH'S MAGAZINE

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HERE RESTS A DELIGHTFUL DWELLING.

A Group of Spokane Homes

SPOKANE, Wash., is a city peculiarly fortunate in a scenic environment, which affords a wonderful setting for its beautiful homes.

Built upon a rocky sub-stratum of black basalt, a volcanic deposit of past ages, it is surrounded by distant mountains, fir-topped hills, among which lakes nestle and broken by picturesque, rocky ravines and deep gorges through which streams trickle, while its mighty river rushes past. Picturesque and charming points of view arise on every hand. The people are alive to all this beauty, and so are the architects. Therefore Spokane is famous for the beauty of its homes. Without doubt, there are not more elegant residences anywhere in the country than in Spokane,—millionaires' homes with a great wealth of nature and art combined in their setting.

The first illustration shows one of these rich men's homes, the dwelling melting into the beautiful grounds as if moulded there. With great taste the house has been kept free from any sense of dominating or overpowering the landscape, as so many pretentious mansions do, its many picturesque features almost concealed in the masses of luxuriant growth about it. In the background is seen one of the great boulders of the black basalt rock which underlies the



DINING ROOM IN F. LEWIS CLARK HOME.
The walls and ceiling are richly paneled in Honduras mahogany, left the natural color. It is furnished in antique mahogany. The chairs are upholstered in tapestry; rich Turkish rug.

whole city and crops to the surface in huge, fantastic and irregular shapes, which are the delight of the landscape artist and to which the rest of the grounds are conformed. The lower story of the house is composed of the black basalt, with half timber work, some of it finely ornamented, and rough-cast plaster panels. There is a formal, but not too formal garden in the foreground, enclosed by a high brick wall. There is just a glimpse of the tall, massive chimney, also of brick, and covered with English ivy clear to the top.

The sumptuous elegance of the dining room, and its rich appointments, shows the character of the interior.

It is not, however, with the stately mansions of the millionaire that we are chiefly concerned, but the type of home built by the man of moderate means, in Spokane. Take for instance the home of the editor of the Spokesman Review. Editors are not popularly supposed to be rich, but this house might be coveted by many a rich man.

Here rests a delightful dwelling; on the crest of rising ground, yet sequestered and with an air of repose. With a grand, distant prospect, the house itself nestles confidingly among the firs and pines, its placement partly behind the slight rise of ground conveying a charming sense of retirement. The drive circles gracefully up to the entrance, which is modest and unpretentious. The house hugs the ground, after the manner now in vogue, and dear to the artist's heart. The low, down-sweeping roof lines convey a sense of shelter and kindness, as though gathering all within into its friendly embrace. The first story and the basement walls are built of the basalt rock which is such a valuable architectural asset to builders in Spokane. Not only does it make for picturesque effects



THE USUAL PLASTER AND HALF-TIMBER TYPE.



A FORMAL DESIGN IN AN INFORMAL SETTING.

in the composition of the building, but in the landscape and scenic effects as well. The whole region is full of it, the basements nearly all have to be blasted out of it. Foundations are thus easily had, more rugged and picturesque than cobble stones, and of great variety, as some of it looks like dark granite, while other sections of rock are black and frowning, or sparkle with mica like gems.

Thus it comes about that this sympathetic use of a local material, links the dwellings to the site and makes them an integral part of the nature about them. Nor does this free use of the rock become tiresome or monotonous, for the ideas are so varied and the interest does not stale.

In the present instance the basalt is combined with shingles stained brown, with an ivory trim which is given interest by the quiet but elegant ornamentation of the barge boards in the gables The roof dormers are most happily disposed; the quaint rounding casements set in the black rock form a delightful foil to its roughness, while the hooded oriel hanging out upon it is simply fascinating. The house melts into the landscape as though it were made with it. Somewhat more upon ordinary lines is the residence shown in the third house shown, and built in a newer and less finished section of the growing young city. For Spokane, with its population of 105,000, is a very young city. The basalt rock enters into the construction of this house also. In the fourth instance it is composed with brick and plaster, in a more formal and regular design, a type of house which is familiar to Easterners, and which does not seem quite happy in its union of such opposite materials. The severer, classic form, the dominant horizontal lines, the regular, centralized openings, the smooth, hard, plaster surface, do not compose well with the rough rocks and the scraggly pines. Nature here has provided a setting for a more informal architecture, while this house demands a lawn as smooth as the velvet a milliner draws over a hat brim.



CRIES ALOUD FOR ORANGE GROVES AND OLEANDERS.

Every architect nowadays is a law unto himself, except in so far as his client is a law unto him. With some it is al-

ways the "five orders," with others unusual effects of color and unusual manipulation of materials. It is not surprising therefore, that even in Spokane we find people wanting a Spanish-American dwelling, and architects to embody their desires.

This house cries aloud for orange groves and oleanders—for it is truly a lovely vision, a house full of charm. The pure ivory of the exterior, the rich warmth of the red tiled roof, the beauty and symmetry of the openings, all give pleasure to the beholder. The rather unusual treatment of the inside trim of the openings which is stained the same dark moss green of the outside trim, forms an agreeable relief to the ivory surface of the stucco exterior.

Modern habits of travel have brought the old world very close to us, and modified bits of old world architecture are abundant in Spokane. But it is the informal and irregular forms of beetling crags and frowning castles that are most in harmony with the imaginative landscape of Spokane.



Harmony in Furnishings

By MARGARET GREENLEAF



A "WING CHAIR" HOBNOBBING WITH "MISSION."

THE amateur in house decorating and furnishing is more than likely to feel when the time for selecting the furniture arrives, that the real stress of the work is over, and the successful completion of the house will be easy. The promising advertisements of furniture shops and department stores, which seem to provide for every room and every contingency that may arise, are in a measure responsible for this feeling, which unfortunately is rarely justified. A word of warning then is timely when this phase of the fitting of the house is reached.

It must be borne in mind that there are several important considerations to be reckoned: first, the uses to which the room to be furnished will be put; second, the setting provided by the detail of wood trim and wood treatment; third, the style, form and color of any pieces of furniture on hand which must be included in the scheme; and last, but of no means of least importance, the amount of money to be expended on the rooms as a whole. It



In this Colonial bed-room the two-tone wall covering is accentuated by the cotton print, which is used as over-draperies, couch cover and pillows. The mantel is also worthy of attention and can be easily reproduced.

is always found much more practical to make an estimate on the whole scheme rather than on individual rooms, as frequently unexpected saving may occur in one room which will permit of some more satisfying extravagance in an adjoining room.

Where the house is suggestive in any way of the Colonial, much of the woodwork is likely to be finished with white enamel. If this is true, mahogany furniture, or of some wood resembling it, will be found to adapt itself most readily to such setting.

Frequently, even in the house of moderate cost, the hall, reception-room and living-room will show the standing woodwork finished in ivory white with the doors and hand rail of the balustrade of mahogany. In these rooms the furniture should all be of mahogany, birch or cherry, and of simple and quaint lines.

The charming Colonial room, of which the fireplace end is shown in the picture, is a good example of typical Colonial furnishing where the livable qualities of the room are not sacrificed to the period idea. The Governor Bradford chair shown on the left of the fireplace is one which is particularly successfully reproduced. In birch this may be purchased for $6.75, in solid mahogany the price is somewhat higher. The two tone wall covering used in this room and the simple restrained decoration of the mantel is worthy of study.

Where the architectural detail of the standing woodwork in the dining-room of such a house is simple to plainness, oak furniture will find an effective background in the ivory finish of the paneled wainscot, if such be used.

A very attractive living-room and library is shown in illustration No. 2. This room is in the Washington home of a well known literary woman, whose excellent taste and charming hospitality is admired and enjoyed by many. Here the the davenport is set facing the fireplace, and back of it stands the library table. This is a very wise arrangement in a room where space will permit, as the reading



A VIEW OF THE LIVING-ROOM.



THE OVAL IN THE BACK OF THE SOFA WAS COMPEMENTED BY THE OVAL FRAMED PICTURES HUNG ABOVE IT.

lamp may find a convenient place upon the table. The built-in book shelves at either side of the mantel shown in the photograph are excellent features. It should be noted that the line of the mantel is continued in the top of the bookshelves, thus keeping the balance of the room.

In illustration No. 3 another type of living-room and library is shown. Here the paneled walls are of wood like the cross - beamed ceiling. The furniture shows a mixture of types, but the pieces are well placed and there is a spacious airiness about the room which is extremely attractive.

Where old furniture is to be utilized it may often be brought well into the scheme by such doing over as even the amateur in upholstering is able to manage. The corner of the little drawing-room shown in photograph No. 4 shows a small old fashioned sofa which was not, however, old enough to be quaint, dated about the period of the Civil War. This furniture was of cherry, and to utilize it in the drawing-room shown, it was carefully treated with ivory enamel and given a soft finish. In its original state it was upholstered in slippery black hair cloth. Over this the clever woman who was doing the work herself stretched tautly, heavy unbleached cotton, tacking it securely in place, then the final covering was added. This was a linen and satin damask, selling for $2.50 a yard, fifty inches in width, and showing the little lattice design which is always quaint and attractive in color; it was in two tones of soft old red, the walls being of rough plaster, tinted a lighter shade of the same color. The woodwork in the room showed the same ivory as the furniture. The oval in the back of the sofa was complemented by the oval framed pictures hung about it. There were several chairs belonging to this set which were treated in the same way, and at very little expense some exceedingly attractive pieces of drawing-room furniture were obtained.

Winter Gardening

Tomatoes Ripened in January

A FARMER in a suburb near New York picks his first tomatoes when he is cutting his hay, and another gardener, not far away, ripens tomatoes indoors from the first frosts until after New Year's.

Every home garden grows tomatoes, but every gardener does not get the best results from the time given to it. Although we all have tomatoes from August to October, why should we not double the season of this useful vegetable, especially as it can be done without any great trouble or expense?

Now is the winter of our discontent made glorious summer by the gorgeous catalogues of the seedsmen—those brilliantly tinted, seductively worded brochures whch so often "but allure to fly * * * like Dead Sea fruits, that tempt the eye, but turn to ashes on the lips." And the amateur gardener's heart is cheered by the halftone illustrations of great globular beets, crimson-skinned radishes, tomatoes clustered on the vine in scarlet fleshed profusion that bring a rapture to his heart such as is only known to the enthusiast. For your gardener, even if he gardens only beside the January fireplace, from catalogues, is always an enthusiast, and each recurring catalogue season brings on an attack of gardening mania that too often is completely cured before the time for actual operations is at hand.

By all means, grow your own tomato plants. If you have a sunny south window in an upstairs room, where you can place a broad, shallow box, you need nothing else in the way of hotbed. Toward the latter part of January fill your box with good, rich soil; if you can get mold from the woods, so much the better. A portion of the soil should be sand; this makes the mixture friable and keeps it from packing hard and drying out. Enrich, if necessary, with some sort of fertilizer; old, black, thoroughly rotted manure from a cow stable is preferable to any and all others. If, in the sunny window above mentioned, there happens to be a low radiator, fine! Set your earth-filled box thereon, letting sunshine and the heat of the radiator work their will with the soil. Moisten it from time



Tomatoes Ripened in an Enclosed Shed.

to time, and turn it over occasionally; an old, discarded kitchen fork answers mighty well for this purpose.

Along toward the middle of February—a couple of weeks later, if preferred—plant your tomato seeds. Take a little extra pains in doing so; mark off little furrows in the soil, half an inch deep and three to four inches apart. Then place the seeds, one at a time, in the furrows, laying them as straight as possible, and at least one inch apart. By doing this, you will find that you have rendered unnecessary a lot of thinning out after the plants are up, that you will have finer, sturdier plants, and fewer sickly, spindling yellow weaklings, and your packet of seeds will go about three times as far.

Firm the soil down over the seeds, sprinkle lightly, and go away about your business. The tiny plants will be up within two or three weeks, even under unfavorable conditions; a pane of glass laid over the box, but raised, say, a quarter of an inch above the sides, will hasten germination. Keep the earth sufficiently damp, but never too wet. When the second leaves show on the plants, thin out to stand from two to three inches apart in the rows; when they are an inch and a half to two inches tall, scoop them, plant by plant, out of their original location and transplant; by this I mean simply to move each row over, say, an inch or two. This promotes root growth and makes the young plants much more stocky and hardy than would be the case if each little plant were left in its original location. Keep them growing right along. With the coming of warm spring days set the box—covered with its pane of glass—out of doors, thus gradually hardening the youngsters, and when the weather man says you may set your plants out in the garden you are assured of strong, sturdy, healthy vines, of your own growing, and of a variety that you can vouch for; vastly different from those that neighbor of yours bought at the grocery.

Tomatoes demand heat and moisture, and a steady and continuous growth is very important. Any check, especially when the plants are small, will be apt to affect both the quantity and the quality of the fruit. Better results come from one transplanting, when the seedlings are small, perhaps two weeks from seed sowing, and another when they are set in the open garden, after frost is over, than from more frequent transplantings, which naturally checks growth for the time. The proportions of light, water and heat must be such that the little plants keep up a constant growth. The plant is trained to one stem, so that the number of stems is reduced, and the growth is forced into these few.

It is easy to keep tomatoes in good condition outdoors until November, in a mild season, by laying flat a few well-filled vines, and protecting them with several thicknesses of bagging. At the approach of frost all perfect green tomatoes that have reached full size may be picked off and ripened in a closed drawer or closet. Vines well filled with good-sized green tomatoes, when frosty weather comes, should be uprooted and hung, upside down, on a nail in a sheltered outbuilding or cellar, where they will ripen fruit for weeks. Sliced tomatoes on January 6 was the record from vines so treated.

A Little House with Rustic Trimmings

By UNA NIXON HOPKINS

THE plot of ground here is merely a ledge and the bungalow has been made to fit it.

The rustic accessories were constructed of small trees that had to be cut before the house was built, and the plan is to cover all of the rustic detail with ivy. Vines will certainly add to the picturesqueness of the place, especially when the pergola porch in front is covered.



The big room has four exposures, and is living room, dining room and sleeping room in one, though breakfast is to be served in the buffet kitchen during the winter and on the terrace in summer—the little terrace is paved with cobblestones picked up on the hillside.

The main room is covered with a heavy canvas which has been painted with two coats of light tan water color, put on roughly so that the brush marks show. This gives a leather-like quality to the walls. Window hangings of plain cotton material are a shade lighter than the walls, with bright stencil borders, and couch covers of burlap are likewise decorated. Home-made rag rugs cover the floor. The house and lot together cost less than four hundred dollars, but is preferred by its owners to "rooms" in the near-by city.



Attractive Small House at Low Cost

By CHARLES R. WAITE

THERE is always a demand for houses that, while suitable to occupy a large lot in a somewhat restricted suburb, will not cost more than $5,000. Such a house as that shown in the accompanying illustrations might, if erected under contract, cost nearly $6,000, yet it was actually built, some two years ago, for $4,573. This was made possible by the fact that it was built by day-labor, and that the owner not only bought all his materials direct, but superintended much of the construction work himself.

This house is constructed in the usual manner, with a substantial frame. The exterior walls are sheathed with spruce, or hemlock, boarding, over which the shingles are applied. The side walls are stained a dark brown, and the roof a moss green, colors that contrast pleasingly with the white sashes and cypress trim.

The first floor is about three feet above



BUILT BY DAY LABOR FOR $4,573.

the grade of the lots. This not only gives a better position to the house, but saves the cost of excavating a full depth cellar. The foundation walls, in this case, were made of local stone, and the effect is very pleasing.

The cellar, which has a height of seven feet, is provided with a concrete floor, is whitewashed throughout, and ample provisions are made for laundry, servant's toilet, vegetable cellar, and a cold-storage room for other provisions. There are also bins for coal and wood and a hot-water heater to supply the nine radiators distributed through the house.

The house is built nearly square, with a front porch that is ten feet wide, and a rear porch six and one-half feet in width. The second story projects over the porch, and even extends one foot over the walls below, which tends to reduce the possibility of the unattractive box-like appearance which it might otherwise possess.

From the front porch the door opens upon a small vestibule which leads directly to the living room. Here the woodwork is stained a dark brown and waxed and, like all other rooms on the first and second floor, it has a hardwood floor. The great attraction of the living room, however, is the generous fireplace, which is made of uncut rubble stones. To produce the desired effect, the chimney was made large enough to serve the heater and the kitchen range as well as the fireplace, and as this was so located that it protruded nearly two feet into the living room, it formed a most unique natural mantle. By the side of the fireplace a high-backed settle was placed, which makes an ideal cozy corner for a cool night.



FIREPLACE OF UNCUT RUBBLT STONES.

The dining room, which opens from the living room through a wide doorway, is made very cheery by its lightly-tinted walls and white enamel paint. The deep alcove at the rear of the room is utilized as a convenient place for the sideboard. The second floor contains four good-sized bed

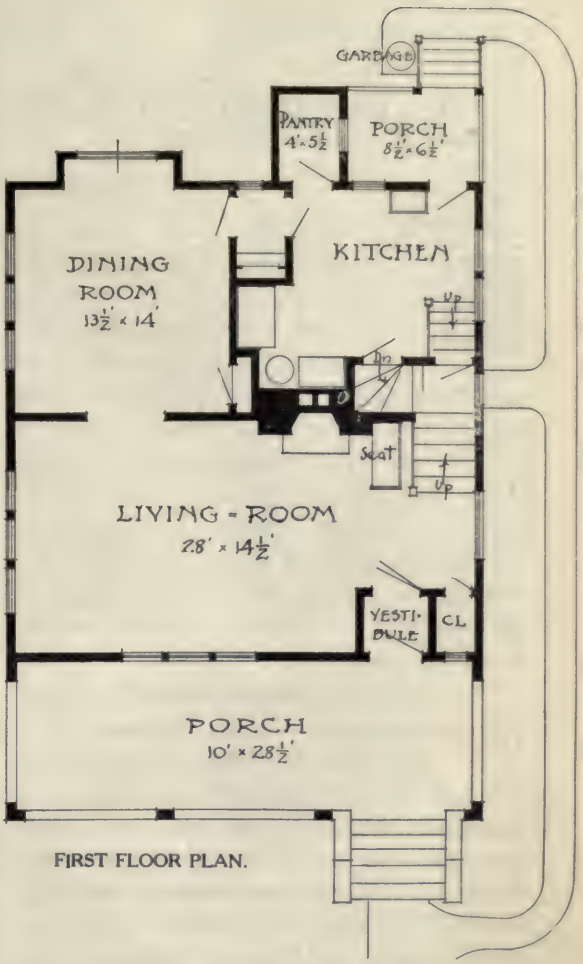
rooms, or, as is done in this case, one of the rooms may be used as a studio, or "den." There is a good bath, with tiled floor and wall, to the height of five feet, and plenty of closet room, the large closet in the rear being fitted with moth-proof cedar drawers. There is a finished maid's room and an unfinished attic on the floor above.

The walls and ceilings of all the rooms, except in the living room where the beams are exposed, are plastered with two coats, and sand-finished and tinted. The further treatment of the walls, of course, may be left to individual taste, as there would be little difference between the cost of wall-paper and oil paints, while the slight extra expense due to the use of the latter would be readily offset by the increased durability.

The following table shows the detailed cost of the house:

The Cost.

Foundation, labor and material..	$325.00
Chimney, labor and material....	75.00
Flue lining for chimney.....	13.00
Stone fireplace, labor and material	43.00
Lumber, including framing, sheathing, floors and mill work.	1,194.00
Shingles, 16-in. for sides; 18-in. for roof.....	172.00
Lathing	113.00
Carpentering work.....	848.00
Plastering, labor and material...	250.00
Tiling	35.00
Painting and staining, labor and material	277.00
Plumbing	380.00
Heating plant, including nine radiators	328.00
Hardware and trimming.....	98.00
Wall paper, labor and material...	81.00
Cellar floor, labor and material..	45.00
Electrical work, including fixtures	96.00
Incidentals, including cost of plans ($25.00)	200.00
	$4,573.00



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

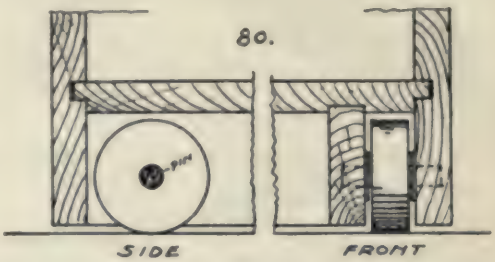
Construction Details of the Home

Built-In Pantries

THE arrangement of the pantry, its shelves, drawers, etc., and the rangement of kitchen dresser depends considerably upon the size and shape of the pantry and kitchen, each house presenting a different problem; but mostly the arrangements depend upon the requirements of the housekeeper. Each mistress of a home has her own ideas as to where she wants the chinaware, silver, table linen, kitchen utensils and food stuffs, and her wishes should prevail.

The first requirement should be convenience more than looks. If one prefers to do their pastry work in the pantry away from the heat of the kitchen, there should be provided at least two flour bins, one for white flour and the other divided into two compartments for other kinds. The best arrangement is to have three bins, two of them divided into compartments; in this way, white flour, corn meal, rye flour, whole wheat and sugar can be accommodated.

The flour in the bins should be easily accessible and the bins should be so made that they can be removed at pleasure for cleaning around them. There are several ways of doing this; the best, however, is to have them roll back and forth on four large wheels (detail 80, these wheels can be made of wood, iron or china), in this way they can be easily managed and easily removed. The size of each bin depends somewhat upon the amount of flour it is desired to store at one time and the space in which they can be placed. As too much flour in the bin makes it hard to manage, a good size is 20 inches



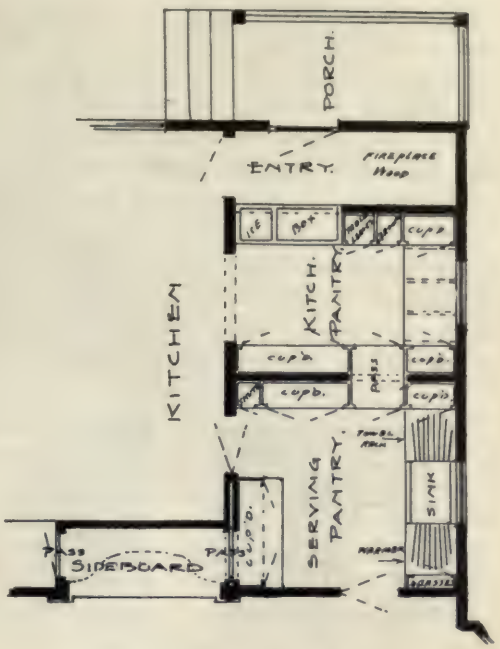
DETAIL OF FLOUR BIN WHEELS
SCALE =

wide, 20 inches deep and 26 inches from the floor to the top, outside measurements. The bottom of the bin should be at least four inches from the floor. Above the bins should be a flat shelf at least 24 inches from front to back and 30 inches where it can be allowed. Above this shelf should be a pantry window. There should be a smooth board above the shelf at the wall, 16 to 10 inches high. The shelf should be 30 inches from the floor. It is best to have a movable kneading board and a place for keeping it handy. Directly under or within reach of the shelf should be one or two small drawers in which to keep pastry utensils. Eight or ten spice boxes should be close at hand, either in the pantry fixtures (73) or in a separate case on the wall. They are sometimes placed above the bins just under the kneading shelf. A good size for a spice box, inside measurements, is two and a half inches wide and deep by three inches long, and the box made of quarter-inch boards.

Near the bin should be some open shelving whereon to set the pans of bread, pies and other pastry as they are made. These open shelves are also necessary as a place to lay the dessert and

other dishes which are to be placed on the table during the progress of the meal. The lower part of the pantry fixtures should be divided into compartments and drawers to suit individual requirements. Some housekeepers would require in the pantry fixtures a place for the hash bowl, kneading board and a place for storing extension table boards. A little careful planning will usually find a place for all of these. Each pantry should have several broad drawers for table linen and small drawers for knives, forks, etc. The average table cloth is six feet wide and folds up to eighteen inches. It needs a drawer about two feet long to contain it properly. A six foot drawer for table cloths is sometimes used in a larger pantry. It is a mere luxury, however, and is not absolutely necessary. It should be very shallow when used or it cannot be pulled out easily. A drawer about 28 inches by 28 inches by 2 inches deep, inside measurements, is really needed to contain doilies, center pieces, and tray cloths which are never folded. It is best not to make the drawers very deep, but make more rows of them. A deep drawer when filled cannot be easily drawn back and forth. Five inches is a good depth for a pantry drawer and six inches should be the limit.

Drawers more than 24 inches wide should have two drawer pulls. Drawers should be made of seven-eighths inch boards, and have a board shelf division between each row. The fronts of the drawers can be paneled for looks, but are kept clean easier when the front is one plain board rounded on the outward edges. All lumber in pantry fixtures should be perfectly smooth and dry, of white or yellow pine. In pretentious homes oak or birch is sometimes used for all exposed parts. Pantry shelves should be of seven-eighths boards. They are usually fixed in place but can be made adjustable. There should be from 10 to



12 inches distance between the shelves inches wide.

While these dimensions for shelves are given, it is better to give the matter of and each shelf should be from 12 to 14 shelves more study on each problem (tho it is seldom done). The wider the shelves are, the greater should be the space between them in order to be able to reach over and take out the dishes behind. It is best to make the lowest space above the counter about twenty inches high, for the platters often run as wide as eighteen inches and should be stood on edge on the counter top at the back; for this purpose a narrow strip should be run along the top of the counter near the back. When a tall space is required for tall vases, pitchers, etc., it is a good plan to place a thin shelf about four inches wide and six inches from the top for tumblers. On the edge of this shelf can be placed a row of brass or nickel plated hooks on which to hang cups, cream pitchers, etc.

Pantry shelves and kitchen dresser

shelves should not be more than seven feet from the floor, as higher than this makes too high reaching. The front of the fixture, however, can be built up to ceiling to prevent the dust from gathering on top. Pantry doors should be seven-eighths inch thick and narrow in width, having glass or wood panels. If glass panels are used they can be plain or leaded. A neat plain moulding, running along the top edge of pantry fixture, always looks well. Pantry fixtures are sometimes stained and varnished, but are best painted. All pantry doors should swing (see door problem) both ways from the hinge. When the pantry fixtures are of pine and painted it is a good plan to swing the door to the dining-room from the side. That will make the servant walk around it to enter as she swings it before her. In this way it acts as a screen. If the fixtures are painted or stained with some taste, this arrangement is not absolutely necessary. Fixtures if of oak or birch can be made to harmonize with the dining room in finish. If the latter they can be stained and varnished to look like mahogany. A pretty fixture is one that is stained green and varnished for the main case and doors, with a white enameled crown mould, counter board, shelves and lining.

Plan 76, of which 73, 74 and 75 are the elevations, illustrate many of the foregoing remarks. It is a compact arrangement in as small a pantry as one should be. It is 4 feet 3 inches by 9 feet long.

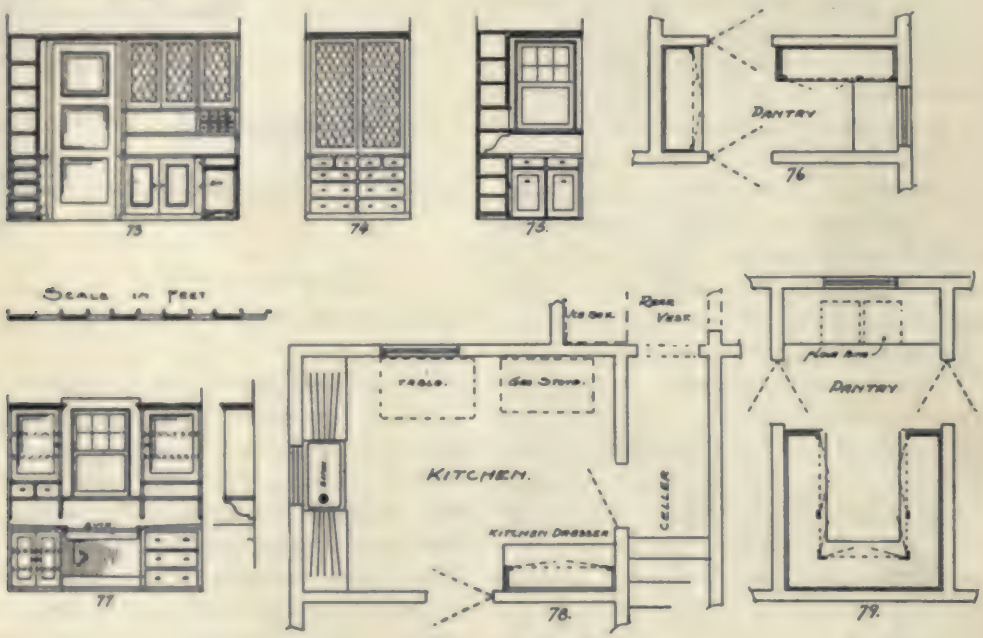


PLATE VI.

Plan 79 shows a still better arrangement in a larger pantry. A kitchen dresser, so-called, is only a small pantry fixture for kitchen use, divided into upper and lower compartments about the same as a regular pantry. The flour bins are sometimes placed in the lower part of the kitchen dresser. It is very convenient and every kitchen should have at least one dresser, the longer it is the better.

The size of some homes allows for two pantries, a kitchen pantry, and the butler's pantry; one for dishes and serving and the other for pastry work and

kitchen utensils. This makes a very convenient arrangement when the space is available.

A floor plan is submitted showing an almost perfect arrangement, such as one seldom sees, not even in an architect's own house (he often has the hardest client to please). There is a vestibule entry with space for fireplace wood and access to the refrigerator, which opens to all compartments in the kitchen pantry side, which is really a work alcove having no door but instead a cased opening. This contains a marble pastry table under which are three flour boxes and space for the hash bowl. There is also a spice box and plenty of drawers and cupboards for kitchen utensils. Also cupboards for table leaves and brooms. In the serving pantry are cupboards for dishes and a sink for washing the fine china ware. Under one sink board is a dish warmer consisting of a built in metal oven with small radiator pipes close together forming two shelves. Under the other sink board is a bottomless drawer containing quarter inch rods set one and a half inches on center for the dish towels. When the towels are needed the drawer is drawn out. Just under the counter top in both kitchen and serving pantries are sliding shelves that slide out when needed, in the same manner as office desk slides. These are very convenient at times. The two pantries are connected by a pass and the serving pantry is also connected with the sideboard at one end, which at the other end is connected with the kitchen by a pass. These short cuts for passing dishes save many steps during the day. The clothes chute starts in the bath room above and therefore in its location in the pantry makes it handy for passing down the towels, etc., from above, table linen and kitchen clothes.

The hardest problem is a little home whose size and cost will not allow of any special pantry, and the kitchen must do service for both. Plan 78 is a good solution of one problem. This kitchen is 9 by 12 feet. It is merely presented to illustrate a few suggestions, as its size, shape and location should be altered to meet the different requirements of each with window over, are placed across one end of the room with dining room door opening toward it. A kitchen dresser is placed in the corner opposite the gas stove. A chimney in the corner would make a wood stove possible. The kitchen table is placed under a window. This table should be built by a carpenter with flour bins and drawers under it. A smooth marble slab always makes a good kitchen table top. The heat register or radiator should be placed under the sink or kitchen table out of the way. Illustration 77 is a detail of the sink end of this kitchen. This convenient arrangement around the sink can be put in almost any kitchen. Space has been left between drain boards and the wall fixtures above for stacking dishes. Never enclose the under part of a sink, as it is very unsanitary. Pantry doors between pantry, kitchen and dining room should be directly opposite and swing from the same side. (Plans 76 and 79.)

The foregoing remarks and the illustrations contain many suggestions which can be applied to any pantry or kitchen. They are not intended to apply entirely to the plans and details referred to.

Designs for the Home-Builder

Design B 306.

The opening design in our New Year's number is a very excellent study by Architect Geo. M. Kauffman for a cement plastered house of fair proportions. The perspective rendering is an artistic one and shows the pergola treatment of the open terrace at the south side of the house. It is a sketch well combined for comfort both as to its exterior appearance and interior arrangement and Mr. Kauffman suggests that the plaster finish of the exterior wall be left in the natural gray cement, treating the roof in red.

The interior is treated with the now ever desirable long living room running across the entire end of the east side of the house, with fireplace located on the middle of the outside wall, thus giving a splendid view of it from both dining room and hall. The library is so located as to be quite a retreat from the general living rooms. In addition to this, is also a moderate sized den with fireplace. From the den one can step out onto the garden porch which could easily be enclosed and used for a garden dining room, or sun porch as might be preferred.

Customary hardwood finish with hardwood floors, either Birch or Maple, is intended for the ground floor and soft wood finish enameled, for the second floor. The house stands 50 ft. 6 in. in width by but 24 ft. in depth with an 8 ft. porch and the estimated cost is placed at from $8,500 to $11,000, according to locality and conditions prevailing.

Design B 307.

A country house unpretentious in its simple and straight lines of architecture, with restful detail has again come into its own. Towers, terrets and cupolas, giving place to a simple rational treatment in keeping with the uses of a country house; and from the work of Architects Keith & Whitehouse, we are delighted with the example of this style of home shown in our next study. It is a house quite recently built of which we are fortunate to show an actual photograph as built, standing at the top of a gentle slope and its soft coloring of grays and greens are given a most effective background by the large pine trees flanked on either side. The exterior is of shingles which are laid seven inches to the weather; the details of the portico and trimmings are Colonial.

It is a most complete modern home in every respect with its full basement containing furnace, fuel, vegetable, toilet rooms and laundry as well as dumb waiter and clothes chute; and on the first story the cement floored conservatory with its windows arranged to drop into pockets in pleasant weather and the garden entrance are noteworthy features. The kitchen and pantry arrangement leaves nothing to be desired there. The rooms throughout are of very good size and of pleasing proportions. The Colonial detail is carried out through the house and its effect heightened by white enameled finish throughout the entire second story. The kitchen and pantry are finished natural and the main rooms of the first floor in hardwood.

The private bath off the owner's room is an unusual luxury in a house of this size. The closet provision is ample.

Design B 308.

This design is in marked contrast to the preceding ones. It possesses the feel-



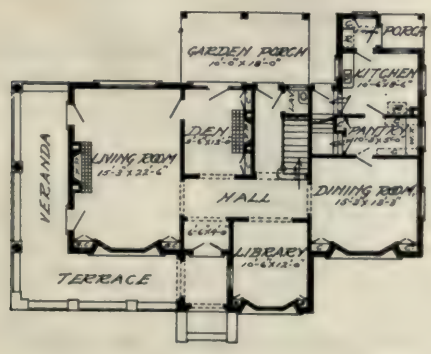
—Geo. M. Kauffmau, Architect.

Straight, Broad Lines for Cement Exterior

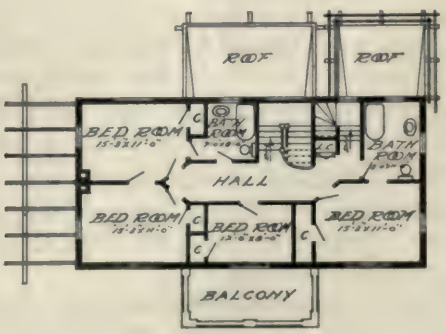
DESIGN B 306

ing and character of the modern German trend of architecture. Its construction is of hollow tile with cemented walls. The roof is red slate. The exposed woodwork of exterior being stained green and the production is that of a very inexpensive fireproof cottage home.

The main portion of the house is square, being 24x24, and contains a large living room. Note particularly the treatment of the dining room alcove and the cozy arrangement. The second floor provides three chambers and bath. There is a full basement and small attic, making a most complete, livable little home. Mr. John Henry Newson is the designer and



FIRST FLOOR PLAN



SECOND FLOOR PLAN

places a maximum cost of $3,000 on this design.

Design B 309.

We are very often requested to publish house designs which are peculiarly suited for a home in the South and we are pleased to show from the work of Mr. Arthur Clausen, architect, a large southern colonial home, now being built at West Palm Beach, Fla. That it is a home for the South is well evidenced by the expansive porches. It is intended to build this house without a basement. The exterior walls to be of siding, with cypress, shingled roof. The interior to be finished in quarter sawn Georgia pine throughout the house. The owner who is now constructing the house in question, estimates that in his section, it will cost about $9,000, but of course, it must be understood that this figure would be materially increased for a home built in the northern climate where full basement and heating plant would be required, as well as a house of somewhat warmer construction.

The design is one which has been very thoughtfully planned for the requirements of a southern home and should certainly please a great many of our readers.

Design B 310.

We now take up for the remaining designs, the study of the cottage home. Mr. Worthington has contributed a pleasing little pictured home of a six room cottage, where the main roof comes clear down as an overhang for the porch, which is 7½x24 in the clear. The vestibule is accommodated within the main portion of the house, from which entrance is made directly into the living room. The arrangement of rooms in this cottage will appeal to many and it is a design worthy of careful consideration.

This cottage finished in soft woods, stained, with fir flooring throughout, furnace heat and concrete foundation walls, is estimated to cost a little over $3,000.

Design B 311.

A cottage may really be commodious with but six rooms, as well as a house cramped with many more rooms. Cramped as far as convenience in their arrangement. This design is Colonial in treatment, with a close, neat moulded cornice. The exterior finish is in rough cement or stucco and the roof shingled and stained. The wide elevation is to the front and the plan provides for a central vestibule from the portico entrance. At the right side of the house is the enclosed piazza which comes under the main roof, adding length to the design. Both living and dining rooms open upon the piazza with wide French windows. This piazza is really carried up to give a splendid sleeping porch off the second floor which will be glazed in, of course, during the winter months.

The interior finish is intended to be Washington fir, stained mission, with oak flooring. The second story finish being natural pine varnished, with light birch floors. There is considerable storage space under the long sloping roof, but no attic. Finished as above described, the cost would be approximately $3,000.

Design B 312

One of the most pleasing cottage designs to be found and suitable for either a cement exterior wall or siding. The heavy square porch columns are detailed for the design in cement according to plans and as built.

Much study was given to obtaining the correct size and placement of the recessed dormer, which proves to be the striking keynote of the design.

The interior is well planned; note the house was built after the reversed plan. Four medium sized chambers and bath on second floor. Furnace heat in full basement. Soft wood finish, stained, with fir flooring, lessens the cost, estimated at $3,250.



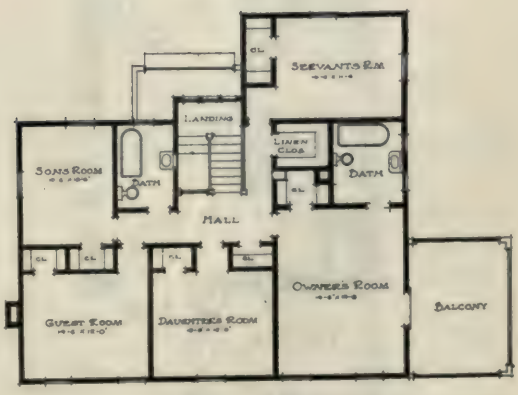
—Keith & Whitehouse, Architects

An Unpretentious Country House

DESIGN B 307



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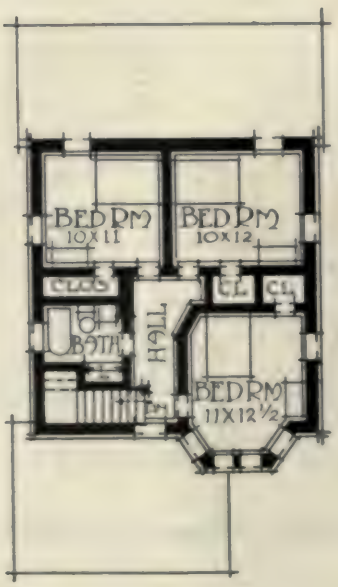


—John Henry Newson, Architect.

In the Modern German Architecture

DESIGN B 308



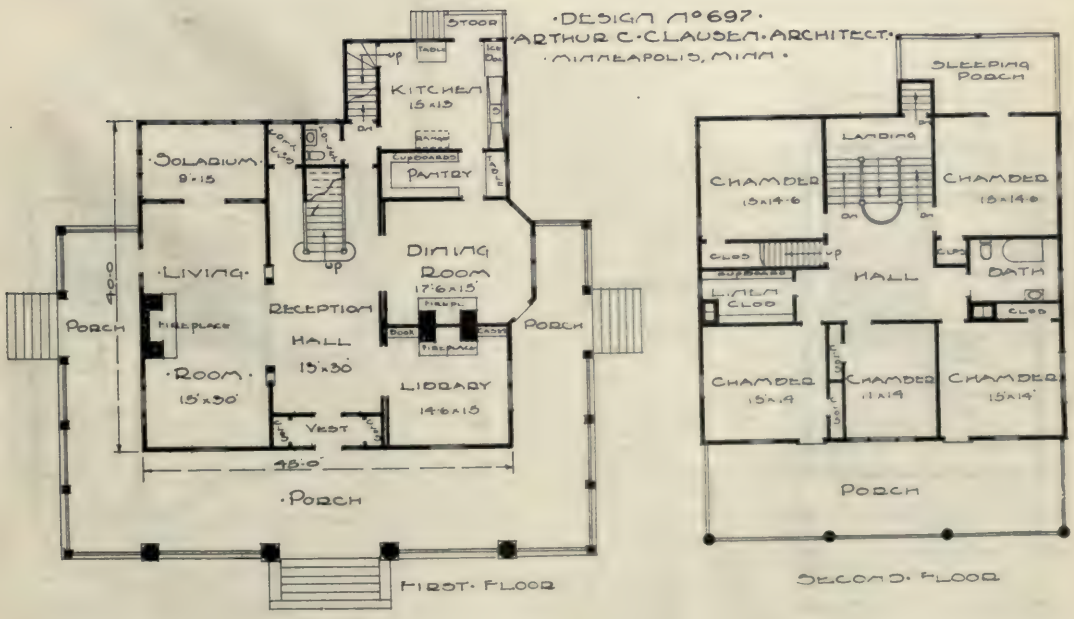




—Arthur C. Clausen, Architect.

A Colonial Southern Home

DESIGN B 309





—George Worthington, Architect.

An Inexpensive Six-Room Cottage

DESIGN B 310



FIRST FLOOR PLAN



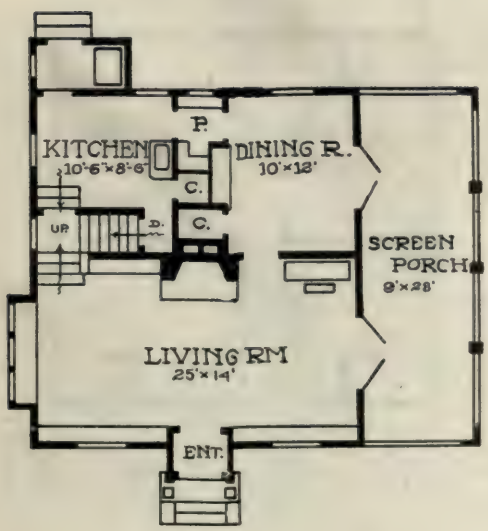
SECOND FLOOR PLAN

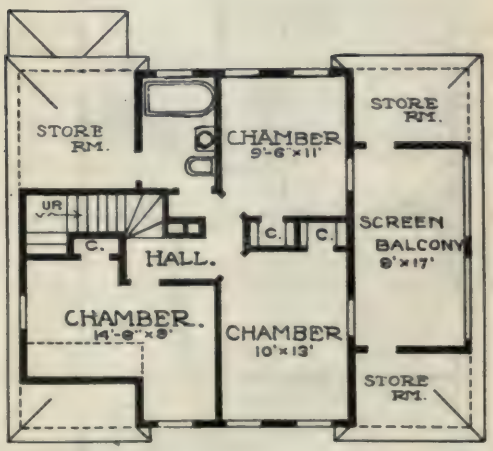


—Chas. Sedgwick, Architect.

A Commodious Six-Room Cottage

DESIGN B 311



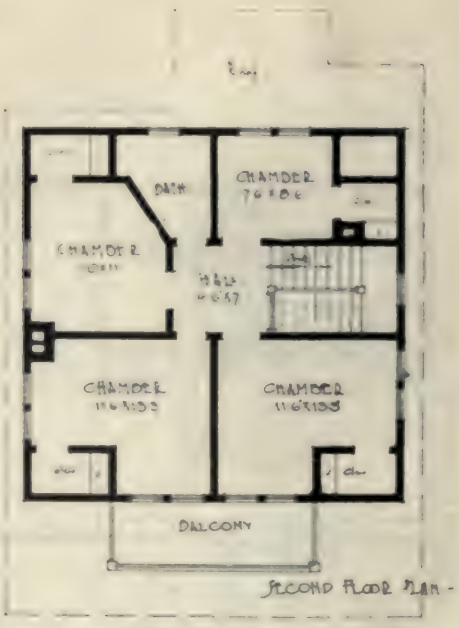




An Interesting Cement Cottage

DESIGN B 312





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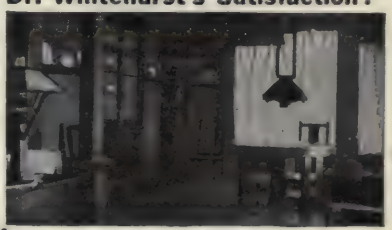
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The Vogue of Period Furnishing.

NOT every one wants to have a house furnished in the style of a particular period, and indeed what is called period furnishing is somewhat out of place in the average house, for the reason that the types of furnishing which have come down to us as characteristic of the various historical periods, are usually those of the palace or the chateau rather than of the dwellings of that middle class, to which most of us belong. The exception is the Dutch style of furnishing, which was comfortable rather than splendid or elegant, and which was the inspiration of much of our own colonial furniture.

But the vogue of period furnishing has been of general benefit, in that it has influenced the designs of all furniture. Because of the demand of a few rich people for chairs and tables of definite style, there has been a great improvement in the designs used for the furniture bought by the average family.. Look at the frames of the low priced parlor furniture now in the market and then at the set of the vintage of 1896, for sale at a second-hand shop, and notice the improvement.

One thing we have all learned, since period furnishing came into vogue, and that is not to crowd our rooms. The cosy effect once so much admired, is no longer seen. We can walk across the floor of our living rooms without danger of collisions. Few people now indulge in a confusion of small pieces of bric-a-brac. The displays of dressing table silver are diminishing in quantity and gaining in quality. No woman now boasts the possession of sixty embroidered pillows. We are learning to look with equanimity at the uncurtained door way, and to think that shades are a sufficient protection for some of our windows. Such things as these are long strides in advance. They tend to the simplification of life, to additional leisure, to a mind at rest from anxiety about trifles, and to the development of the sense of beauty.

The Decadence of Golden Oak.

One good thing has resulted from the copying of historic styles of furniture, and that is the lessening popularity of golden oak. Comparatively little of the newer furniture is in light tones. When a light color seems to be desirable, the bed, or chair, or table is frankly white, or maple in its gray or yellow tones is used. Or else some delicately colored enamel is used, the stone gray of the French decorators, a greenish gray, or the grayish blue dear to the Adam Brothers. But for furnishing which pretends to any artistic quality the strongly marked, highly varnished, molasses taffy colored oak has fallen completely into disuse. And this is a gain in more ways than one, for, apart from its essentially disagreeable color, it is almost impossible to contrast golden oak successfully with anything else. English decorators, it is true, use light colored oak, but its tone is entirely different from that of our native wood, and even they employ it with great discretion.

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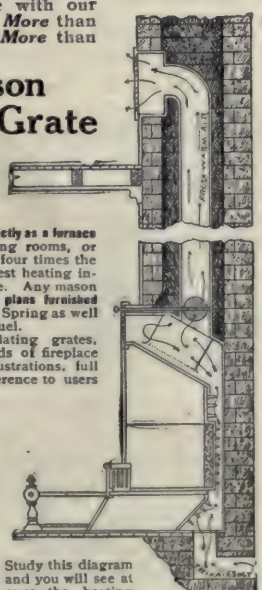
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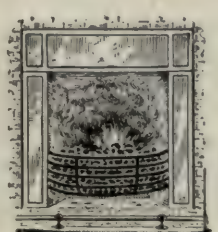
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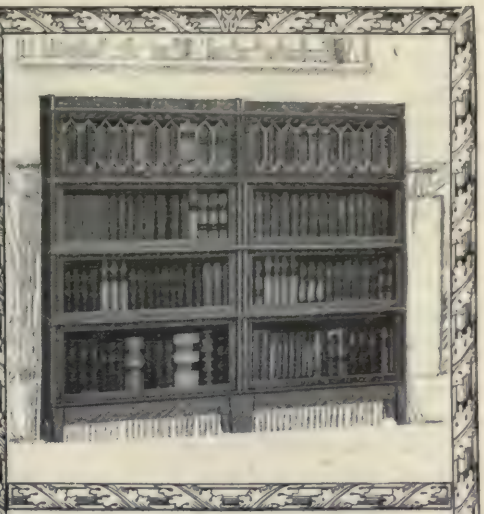


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loons set into the back of chairs and sofas. Some of the furniture was of course upholstered, more of it had cane seats and backs. Tables were generally oval, with painted tops and four fluted legs. They used tall cabinets for China and curios, standing on legs and with delicately made latticed doors. The walls of their rooms were generally panelled in white wood, with much finely carved ornament, and the ceilings were similarly adorned. The whole effect of an Adam room is light, bright, dainty, with a wealth of beautiful detail.

Much Adam furniture is to be had, and it is an excellent choice for a small reception room, as while it is unsuitable for general use it has a permanent artistic value, from its beauty of form and delicacy of finish. It is of course modern, and it is well to eschew the pieces with painted medallions, as they are not, like those in the old pieces, the work of artists, but rather mechanical performances. As with all reproductions, the simpler pieces are the better ones.

For the walls of such a room, an admirable substitute for the carved paneling is found in the wall papers which copy the lines and ornament of that period closely. They are rather expensive, and they require the services of a very superior paper hanger, but they are the only sort of a background which is at all correct. There is a regular Adam ceiling, with classical ornament in relief, generally arranged in a circle, and easily copied for a new house, but failing to use the ceiling should be absolutely plain. The lighting should be from the sides of the room, and a very charming mode is with candles in gilt mirrored sconces.

Modern taste demands a certain amount of color, perhaps because clothes are so much more sombre than they were once, and either the grayish Louis Quinze blue, or a low toned green is appropriate in an Adam room. The best way to use it is in the rug, which should be of plain velvet, and for the upholstery of a long couch. Whatever upholstery fabric is used should be of small pattern, the best being a two toned satin striped damask.

For the little things of an Adam room the choice is limited. Naturally strictly modern things are out of place. There should not be much in the way of ornament, a clock flanked by candlesticks being enough for the mantel shelf. Old Chelsea figures, or their modern reproductions, are suitable, and so are pieces of the cameo Wedgewood, medallions of which, by the way, were often made for Adam furniture. And although pictures are hardly needed there can be no objection to really old steel engravings in narrow gilt frames. Better still are old copperplate engravings, purplish or brownish in tone.

The Return of an Old Color.

The middle-aged recall the time when the acme of elegance was crimson rep. Ordinary people had black hair cloth upholstery and very white lace curtains, generally of the Nottingham variety. Those of more distinction, or prosperity, covered their furniture with crimson rep and had curtains of it as well, and the effect was supposed to be very rich and splendid. Still higher in the scale was parlor furniture in crimson brocade, damask or brocatel, but still crimson. The came the era of subdued tones, of peacock greens and blues, of mustard yellows, of sage greens and old blues, and crimson retired apparently forever.

After all these years one begins to see crimson, in wall papers, in fabrics and in rugs. To be sure it is not quite the old crimson, it is less crude, less purplish in tone, has a suggestion of rose rather than of blue or purple, but still it is crimson.

Red is one of the colors which makes a definite appeal to very many people, especially to men. It has a pleasant suggestion of good cheer, of fireside comfort, and although it has certain associations of splendor, it has so many of a humbler sort that the others do not really count. Yellow on the other hand is so largely associated with the festivities of life that it is seldom really homelike. It is the color for a ball room but not for a study or a living room.

Red is open to one objection, which limits its usefulness. It is one of the colors which have the effect of coming toward the spectator, and of thus reducing the apparent size of the room in which it is used. And it is a color which has a stimulating effect upon the nerves of





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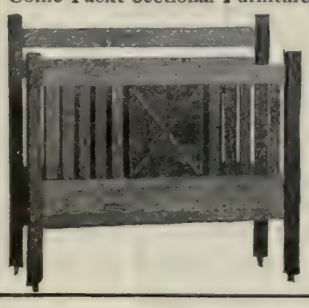
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COME-PACKT FURNITURE CO.

156 Fernwood Ave., Toledo, Ohio

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sense. For the first reason it is not adapted to small rooms, for the other it is not, except in small quantity, desirable for living rooms. Its best use is in the hall or the dining room, and in its paler shades it is a good color for a reception room. A red wall paper is at its best when used above a high wainscot of dark wood, and it works in admirably with rooms of the Craftsman type, in which the amount of wall space is much limited by the constructive features of the woodwork.

Crimson in Oriental Rugs.

In choosing a rug for the crimson room, one finds a wide choice among the various Oriental weaves. Many of the Kashmir rugs introduce rose and crimson shades, in combination with dull blues and greens, while the Serapi rugs many of them have a crimson center. Although in both sorts the red is combined with other colors, these are so subdued that there is no necessity of introducing them in the rest of the furnishings.

It is, of course, always possible to get a plain velvet pile carpet, in a good shade of crimson, but the crimson papers are so nearly in monotone that a patterned floor covering is more effective. Some of the imported Wiltons are in excellent shades of red.

Japanese Ware with Silver Decorations.

Some interesting Japanese porcelains have a ground of solid red or green, with an effective dragon decoration of silver black. Of the two, the red is the better, as Japanese greens are seldom very good. A tête á tête service of this scarlet porcelain has a tray of the carved and lacquered wood, mentioned in a recent number.

Other Japanese novelties are figures of Japanese ladies elaborately costumed, in realistically colored china. These figures are about eight inches high, and cost $1 each.

Old bronze sword guards are imported in great numbers and are sold for paper weights. Some of them are highly ornamental.

Suggestions for Bed Spreads.

An embroidered bed spread, worked heavily and elaborately on white linen, is a desirable possession, and one of indefinite durability, but few people have the patience for so large a piece of work. For the average person and the average house, bed spreads of cretonne or scrim are very satisfactory.

The way of making a bed spread depends on the sort of bed. An iron or brass bed demands a spread which will hang to the floor at the sides and foot. With a wooden bed the spread is usually tucked in all round. Occasionally one is seen tucked in at the foot and hanging over at the sides, where it is finished with a ruffle. A very good one of this sort was made of a scrim of fine quality, marked off in three inch squares with lines of drawn work. A valance edged with wide Cluny lace was set on just at the edge of the bed on each side, and hung almost to the floor. The round bolster was covered plainly with the scrim, and had a similar frill around each end.

For a man's bedroom, a Turkish toweling bath sheet in the natural brown color makes an effective bedspread. A white spread is extremely ugly in a room whose furnishings are dark or bright, as is so often the case in a man's room.

Gray Wall Papers.

Among the very prettiest of the wall papers shown this season are the tapestry effects in gray tones. After a good many years of strong tones of color, we are beginning to feel the charm of the natural tones in association with some sorts of furniture.

Most of these gray papers have tree designs and suggest a dim wood, on a misty, gray winter morning, when everything is shadowy and mysterious. One of them has the misty effect, but it is mist suffused with sunshine. Papers like these are meant for drawing rooms with mahogany furniture, choice pictures and porcelains, rooms whose every detail is daintily perfect. Used in bedrooms they are beautiful back-grounds for flowered cretonne furnishings.

In a room where, for any reason, a dado treatment is desirable, one of these papers might be laid above a width of gray grass cloth, the two blending beautifully. Once in a long time there is a dining room which seems to cry out for a gray wall, and the gray tapestry paper is just the thing for it.

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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

A. H. B.—"I am sending you herewith floor sketch of first and second floors of cottage. The second floor rooms are all en suite, while at the same time they are almost entirely separated; the writer is anxious to carry out a harmony of colors as far as possible. The woodwork in the rooms will be mahogany, waxed finish, and the furniture of the same wood. My idea, is grey for one room—say the southeast, delicate pink or old rose for the southwest. Now the northwest room will be for my son and it is my desire to furnish this in mission, originally it was my intention to finish and furnish this room oak, weathered; but I think mission mahogany furniture with dark green paper and this color carried out in the hangings, carpet, etc., will prove much more effective and richer; now the northeast room or guest chamber, what would you suggest? Or better, improve the entire floor with your ideas.

The first floor, you will note, has hall, library and dining-room. The finish of the wood throughout will be dark weathered oak, and the furniture will be the same. My idea is brown oatmeal paper for dining-room, with maroon drop ceiling; library, dark green, same ceiling, and hall lighter shade of green with same ceiling."

Answer.—We cannot agree with you in your scheme of color treatment for either floor. The northwest room, with one small north window and one west window deeply shaded by the covered porch, would be excedingly sombre with dark green walls, hangings, etc. We advise a return to the original plan of oak woodwork in a light fumed brown finish, with Circassian walnut furniture, which is light brown in color. We would paper the wall in a pale, golden ecru, and use a rich red rug on the floor, with English chintz hangings, having much warm red in them; also have a brown wicker Morris chair upholstered in the same chintz. The plan for the other chambers seems good. On the first floor, however, we would not put brown in the southwest dining-room, but rather a scheme of blue and green, with pale green between the ceiling beams. We should reverse the colors suggested, using browns and soft tans with pale tan ceiling in library and hall.

C. M. S.—Will you please write me the correct way to curtain the windows in the living and dining rooms.

If net and over hanging curtains are used, should they be used over the leaded portions—as there are two clusters of three windows entirely leaded—and a cluster of five with the upper sash only leaded—should the curtains hang from top on the latter?

The woodwork is fumed oak of very pretty grain—and did not like to hide it with curtains.

Answers. — Answering your inquiry with regard to window curtains, etc., it is quite a good way to use a slight suggestion of drapery with such leaded windows, as for instance, the groups of three could dispense with net or lace altogether and have merely one width of this silk, the color to be used in your furnishings or wall decorating at the outer sides of the outer windows of the group. This can either be well pushed back on small brass rods, hanging straight, or be looped back midway up on the window. The large group of five windows should have inner curtains of lace or net or thin scrim, but on the end windows only on the outer side. Then use a drapery over these of same color as silk curtain, only of heavier material, as velour or Aurora cloth. Also a 10-inch valance of the thin silk could run across the draperies with very pretty effect. In this case, one rod, the length of all three windows, would be used and the balance shirred on that.

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Golden Oak Woodwork.

M. E. B.—I am always very much interested in your letters on "Interior Decoration," and as I have recently purchased a home I wish to consult you concerning it. In the first place, the woodwork in all the rooms on the first floor is of a very dark golden oak. If there is anything I dislike, it is golden oak furniture. Can you suggest any way in which I can furnish living room and hall without purchasing furniture to match the woodwork? I must be quite economical in my purchases, but wish my home to be attractive.

For my dining room I must use my present furniture, which consists of a round dining table and chairs, of weathered oak with a wax finish, I believe it is what is known as "Early English." In the dining room I must also use a rug I have, the prevailing color of which is red.

Upstairs there is a front bedroom with a west and north exposure, quite light and connected with a large dressing room. The arch between the two extends nearly across the width of the two rooms, so that they have much the appearance of one room. In the dressing room is a lavatory. The woodwork of both rooms is white enamel, with doors of cypress in the natural color.

A bedroom, with south and east exposures, is also finished in white enamel with doors of cypress. In this room I must put a brass bed (satin finish), and bureau and dressing table of bird's eye maple. I do not like the combination of bird's eye maple and white enamel, but perhaps you can suggest something.

Ans.—We think your interior can be made very attractive. It is not at all necessary to purchase golden oak furniture. While mahogany would not be in harmony with the woodwork, some of our best furniture comes in the fumed oak and this would tone in with the dark woodwork very well, though itself a much lighter tone of brown. The dull finish, of course, helps to harmonize.

Also, a couple of chairs, stained wicker, in living room, upholstered to suit coloring of rugs and draperies, would be attractive. We should advise a neutral tone for the walls, one of the self-toned figured papers in putty or greenish grays, textile effect, with draperies and upholstering in a rich tone of either green or blue. The hall could have the same paper and furniture of fumed oak or walnut with antique cane seats and backs. Such pieces made expressly for halls are among the most attractive of the new offerings. The hall ceiling could be ivory, as the hall has very little light.

The dining room could have a grayish grass cloth wall with frieze showing deep reds, dull greens, etc. If grass cloth cannot be afforded, there are very good paper imitations. Then with soft old red velour side draperies at the windows and the red rug, the room will be rich and dignified.

With the cypress doors of front bed room, we should have furniture of Circassian walnut, a gray chambray wall and furnishings of cretonne in pastel shades of rose, blue and dull green. The bed room with birds eye maple should have wood work painted deep cream, wall paper pale ecru with narrow border in rose and cream, running round top and bottom of wall, also outlining the corners. Use plain rose hanging. If you prefer, green could be the contrasting color, but it would not be as good.

E. M. H.—Our living room is northwest exposure and the trim is in oak wood. I am very partial to mahogany furniture on black leather or even the green willow and dislike very much the regular oak finished furniture for anything but dining room. Will you be so kind as to tell me how to have the living room woodwork finished so as not to clash with mahogany furniture?

Ans.—The only possible finish for oak woodwork that will not "clash with mahogany furniture" is a silver gray stain and dull rubbed finish. It would be far better, however, to use mostly brown wicker if you dislike oak, with a few oak pieces. Oak woodwork and furniture in a fumed brown, are very delightful if interspersed with brown stained wicker upholstered in tapestry. Mahogany upholstered in black leather is an abomination.



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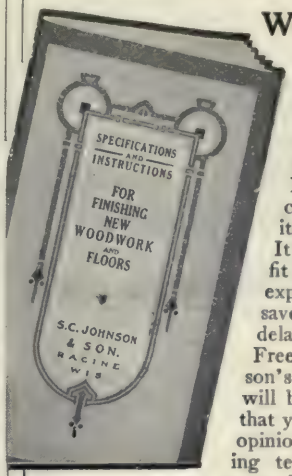
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No. 130 Weathered Oak
No. 131 Brown Weathered Oak
No. 132 Green Weathered Oak
No. 121 Moss Green
No. 122 Forest Green
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S. C. Johnson & Son,
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Pressing Toward the Mark.

NO efficient work is purposeless, a mere aimless doing, day after day, of routine, which after a time becomes absolutely mechanical. The man in the shoe factory who shapes heels all his working life fulfils some purpose, but he is not an accomplished mechanic. When the shaping of heels fails he is useless for any other sort of work.

But good housekeeping must aim at a definite end, the primary essentials of life for the members of the household, the maintenance of a definite standard of comfort and the economical administration of the financial resources of the family. Otherwise, domestic life is a muddle culminating in a deficit.

The essentials of life are food, shelter and clothing, and every one above the class of the submerged tenth gets them in a greater or less degree. As for comfort, it may be questioned whether the average American family of the middle classes knows a great deal about it, involving, as it does, a high standard and an eternal keeping up to the mark. Moreover the requirements of individuals vary so greatly that it is difficult to judge. The essentials of comfort seem to be comprehended in the union of a good fire, a good light and dainty food, yet life may be efficiently maintained in their absence. As for the matter of economical administration it is the keystone of the arch, the thing which is absolutely essential to self respect, to nine hundred and ninety-nine families in a thousand.

As for the economical administration of the financial resources of the family, the practice of what is generally known as economy, the constant habit of saving on every expenditure is not the be-all and end-all of the matter. Economical expenditure is balanced expenditure, and expenditure nicely adjusted to the essential needs of the family. It is quite possible to pinch on essentials, while squandering on non-essentials. The sort of catering which supplies some of the elements of nutrition lavishly and stints on others is false economy, even if it is cheap.

Too few housekepers understand the sort of provision which is expressed by the term, "a balanced ration." Still fewer know how to balance the various items of family expenditure so as to get the most for the money expended.

In getting the idea of balancing expenditures, it is a substantial help to keep a book of household accounts, specifying the items purchased, and occasionally adding up the sums expended for each article. In this way one learns to note the preponderance of any one item, as butter, sugar, or eggs, also is able to check the leaks which sometimes occur when servants are given control of the food supplies.

A Short Cut to Household Accounts.

Keeping an itemized household account book is a great piece of drudgery, which no one appreciates better than the present writer. It may be simplified in this way: Insist that an itemized slip is sent with all meats, groceries and other supplies, and preserve these slips from day to day, having a separate envelope for each tradesman. At the end of the month add up the slips in each department, entering the totals in the account book. At the same time, run over the slips and



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select the principal items, one by one, and in another part of the book enter the quantity of each purchased during the month, also the price paid for it. Thus part of your supplementary account may read:

5 lbs. butter.....$1.65
2 qts. oil 1.70
17½ lbs. sugar..... .88

If in the next month the quantity of butter bought jumps to nine pounds, you know immediately that something is wrong. Also, by tabulating the amount of each supply, you get an idea of the proportions of different things used, and you know if the family is consuming too much starchy food, or using too much sugar. Vice versa, you will detect any falling off in important elements of nutrition. If the slips are carefully saved, and cash purchases accurately recorded from day to day, the matter of keeping accounts reduces itself to a matter of a few hours at the end of the month.

What Constitutes a Balanced Ration?

Careful analysis of food values made some years ago, in connection with an institution for the insane in Illinois, resulted in the following computation as to the amount of the different elements of nutrition required to produce the muscular activity required for persons engaged in physical labor:

4½ oz. proteid.
4 oz. fat.
15½ oz. carbo-hydrates.

In the average diet of the temperate zone, the proteid is principally supplied by some form of animal muscular fibre, the fat by animal fats, including butter and milk. Among people whose diet is principally vegetable, proteid is supplied by eggs, cheese, beans, and various cereals. Cocoa and chocolate also contain a large proportion of proteid.

The average table supplies an ample sufficiency of proteid, too little fat and an excess of carbo-hydrates. To correct the deficiency in fat is not a difficult matter, while small self-denials in the way of sugar will rectify the carbo-hydrate excess. It is when the occasion arises for an exceptional diet that trouble comes. To give an example: a man known to the writer, engaged in mental work of a very exhausting sort, getting almost no exercise, suffered from chronic indigestion and lived for more than a year upon the white meat of chicken, custards and baked apples. Practically all proteid was eliminated from his diet. An extreme case of anemia was the result. When, for any reason, the red meats are eliminated, the necessary proteid must be supplied in some other way, preferably in their vegetable form, as the person who cannot digest red meats will hardly be able to digest cheese, which is the other most available form, or the highly concentrated type contained in eggs.

The Hygiene of Rest.

The mother of a large family, who lived to a great age, attributed her powers of endurance to the fact that she always rested half an hour in the middle of every day. One would like to know whether she was a person of extraordinary strength, or whether she chose the psychologic moment for her siesta.

The time to mend the weak article is before it breaks. The time to rest is before you are dead tired. When the day's work has brought you to the point of exhaustion, nothing but a night's rest will do you any good. It seems to be inbred in most women that it is a merit to keep on working until you are ready to drop. Never was a greater mistake. Work strenuously if you will, for a few hours, then make a break. Drop down flat on your back and relax all your muscles for ten minutes or so, rise up and go on.

Another help in easing one's daily work is to vary it as much as possible. Try not to have long stretches of doing one thing. It is horrible drudgery to stand all day long at the ironing table. But a couple of hours' ironing, sandwiched in between sweeping a room and baking a cake, is not at all arduous. There are seven days in the week and it is not necessary to clean all the rooms in one day. Outside the necessary routine of the meals for each day the household programme ought to be elastic, subject to revision as occasion arises. The definite order is valuable in the house with servants, a bondage to the woman who does her own work.



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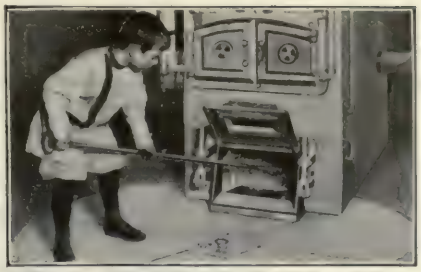
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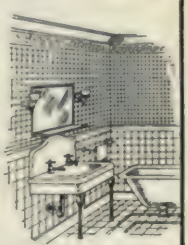
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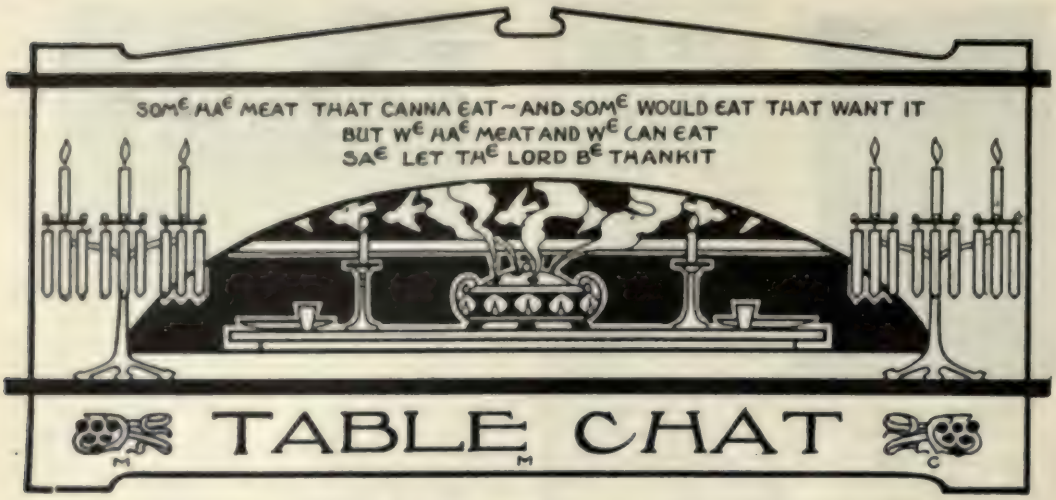
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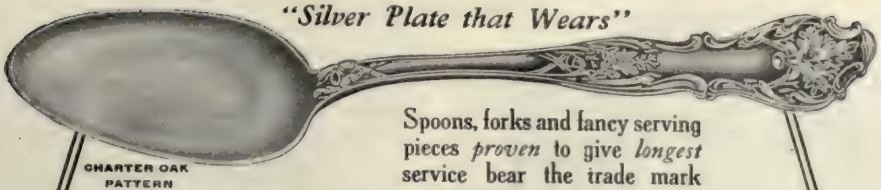
Serving a Crown Roast

Any butcher who takes pride in his calling now knows how to prepare the lamb in what is known as a crown roast, the ribs being used for this, with the bone scraped as for French chops and the tops notched so that they can be easily separated in carving. The meat taken from the bones is passed through the chopper and used for a filling or stuffing for the roast. Arranged in this attractive fashion the lamb is dredged with salt, pepper and flour, put in the baking dish with a cup of boiling water and baked fifteen minutes for every pound in a hot oven, basting being done every ten minutes. When done put on a hot platter, filling the center with mashed potatoes, and put in the oven, with the door open, to keep warm while the gravy is made. For this pour off most of the fat from the pan, sprinkle in a tablespoonful of flour and stir away from the fire until smooth with a fork, then add a cupful of boiling water and cook with constant stirring until brown. The mint sauce should be made several hours before it is needed so that the full flavor of the herb may be



CROWN ROAST.

"Silver Plate that Wears"



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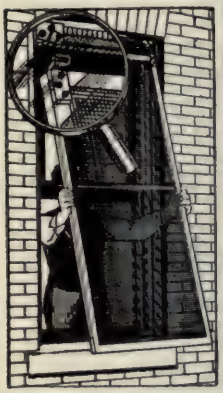
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drawn out. Wash a bunch of fresh mint, then cut off the leaves from the woody stems and cut or chop the former fine. Put in the sauce boat and cover with powdered sugar, then pour in half a cupful of good vinegar. Stand in a cold place until ready for serving, when give the sauce a good stirring for the sugar and mint will sink to the bottom.

Preserving Apples.

A great many people think that it does not pay to make preserves of any sort. If one's time is very valuable, or one is entirely dependent upon servants for that sort of thing, it is undoubtedly better to buy what is needed already prepared, or to rely upon evaporated fruits. But if one is willing to take the trouble, it certainly pays to put up apples. Apples are generally supposed to be a cheap fruit, but no one ever gets cheap apples in a city. If the crop is short they are dear, if the crop is plentiful it does not pay to market them, and so they are always dear and scarce. But it is possible, in the early autumn to get a basket of apples at a reasonable price, and to can them for winter use. Moreover the pippins and other sorts of early apples are the best apples for cooking of the season. The work is not difficult and the amount of sugar needed is small. The principal expense is for the two-quart cans, and they, of course, are a permanent investment. With a shelf of them at hand, one is never at a loss for an acceptable dessert, and the saving in money is appreciable, to say nothing of the fact that the domestic product is much better than anything that can be bought cheaply.

Green Corn and Clams

An agreeable combination for a luncheon or Sunday night supper is that of corn and clams. There are two ways of making it. One is to combine the chopped clams and grated corn, seasoning them with chopped green peppers, mixing them with eggs and cream sauce, and baking them in shells, after the ordinary au gratin fashion.



YOUNG ONIONS BOILED, WITH CREAM SAUCE, TO SERVE WITH LAMB.

Or the clams may be devilled by themselves, covered with crumbs and browned, and the ears of corn be simply boiled. Probably this last method will appeal to the enthusiast for corn, more than the first, but either is excellent. Green pepper sandwiches are a pleasing accompaniment.

Spinach.

Spinach is in season well-nigh all the year around, and is one of the most wholesome of vegetables, but it cannot be impressed too strongly upon the cook that every grain of sand must be removed by many washings of each leaf or the dish will be spoiled. After it has been boiled until a leaf can be rubbed to pulp between the fingers, remove from the fire, drain as dry as possible, pressing out the water against the side of the colander with a tablespoon, then chop me-



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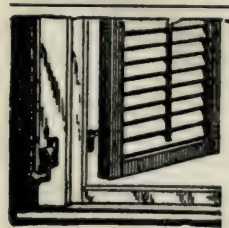
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dium fine, make into a mound in a vegetable dish and garnish with egg quarters; or chop very fine, season with butter and lemon juice, make into balls the size of fishballs and powder the yolks of hard-boiled eggs over the tops.

Corn.

Corn, the king of all the summer vegetables, is usually boiled far too long. The ears, after being stripped of husk and silk and having the ends cut off, should be plunged in rapidly boiling salted water and cooked for five minutes if young, ten minutes if older, and not used at all if so old that the kernels do not break easily under the finger nail. Serve the ears wrapped in a napkin. Corn pudding to eat with the meat course is delicious. Score the kernels on a dozen ears by running a knife down through the centers, then with a spoon press out the pulp, which mix well with the well-beaten yolks of four eggs, a pint of sweet milk and pepper and salt to taste; adding last of all the egg whites that have been beaten well. Butter an earthenware pudding dish, pour in the mixture, and bake in a moderate oven for forty minutes. Serve in the baking dish with a napkin wrapped around it.

Sweet Potato Dishes.

Candied sweet potatoes go well with roast mutton or poultry. Boil and peel as for the scallop. Put in the baking pan a generous coating of butter, then a layer of the sweet potatoes, sliced, covering these with a thick layer of granulated sugar, which dot with butter. Repeat for three layers, ending with the sugar and butter. Put a very little water in the pan —not over two tablespoonfuls—and set in the oven until the top layer of sugar and butter browns and melts into a kind of candy. Another way is to put a lump of butter, the size of an egg, in a deep frying pan with one cupful of sugar and two tablespoonfuls of water. Into this syrup put the potatoes which have been boiled and sliced and simmer very slowly, turning the slices from time to time until the syrup becomes very thick.

Scalloped sweet potatoes may be a new dish to many who only know this delicious tuber as baked or boiled. For the scallop, boil until tender five good-sized potatoes, then peel and slice them. Butter a baking dish and put in a layer of the slices, seasoning with pepper, a little salt, a little nutmeg or mace, if liked, and dot with bits of butter. Cover with a sprinkling of bread crumbs, and repeat until the dish is filled, finishing with the crumbs. Beat an egg with four tablespoonfuls of cream and pour over the whole, then bake for half an hour in a moderate oven.

Sweet potato pie is another dainty of long standing. Boil and mash sufficient sweet potatoes to make a pint, whipping them light with a fork, and adding to them a pint of milk, four well-beaten eggs, sufficient granulated sugar to make quite sweet, and nutmeg to flavor. Bake in a single crust in a deep pie plate, and when firm cover with a meringue of the whites of two eggs beaten to a froth with two tablespoonfuls of powdered sugar and flavored with lemon extract. Press this through a pastry tube in fancy pattern on top of the pie and put in the oven until tinged with brown. This is quite as nice as pumpkin pie.

Sweet potato biscuit are a novel and delicious tea dish. For a batch sufficient for a family of ordinary size, boil three good-sized sweet potatoes, mash, then beat light with a pint of cream. Sift together three cupfuls of flour with one and a half teaspoonfuls of baking powder and a pinch of salt and add to the potatoes. This should make a firm, smooth dough. If too soft, add a little more flour. If too stiff, a little more cream. Cut off pieces the size of an egg and pinch into roll shape. Lay these close together in a greased biscuit pan and bake for twenty minutes in a hot oven.

Sweet potato waffles are another hot bread not generally known, but always popular after they have been introduced. They require two tablespoonfuls of mashed sweet potato mixed with a tablespoonful of butter, while hot, then are added a tablespoonful of granulated sugar, a well-beaten egg, a pint of sweet milk and six tablespoonfuls of sifted flour. Mix well and bake in well greased waffle irons. Butter and powdered sugar, sugar and grated nutmeg, or maple syrup and butter may be used for sauce to the waffles.

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WHY is slate the ideal material with which to cover the roof of a concrete building asks a writer in "Concrete." Because slate is almost absolutely indestructible; will not rust, rot or burn; is not affected by climate changes, nor acids, gases or other substances; will not contract or expand under influences of heat or cold. Embers may fall on the roof of slate and will lie there harmless and in time die out. Therefore, a concrete building covered with a slate roof is a fireproof building.

Roofing slate of uniform shade contributes to the beauty of the building. No deposit can obscure its original color, for with each passing shower every particle of dust or dirt is washed from its plain, smooth surface. Consequently a neatly designed concrete building covered with unfading black roofing slate makes a handsome appearance.

A slate roof, when once in position, needs no repairs and requires no painting or other preservative care. The superiority of a roofing material is determined by its first cost, durability, resistance to fire, the cost of maintenance, repairs and insurance.

Slate is sold by the square, that is, enough slate to cover a space of 10 feet square or 100 square feet. The part of the slate exposed to the weather is the part sold or figured to make up the number of pieces of the various sizes to make a square. A square of slate is almost as cheap as 100 square feet of tin in original cost, and costs but little more than a thousand shingles.

It is claimed with confidence that a roof made of good slate will last 75 years without appreciable deterioration either in appearance or serviceable quality. Consequently a building built with good cement and covered with a good slate roof should last several generations.

Life of Metal Lathing.

The question is often asked: "How long will metal lathing last under ordinary conditions and in ordinary buildings?" This is hard to answer, inasmuch as a great deal depends upon the quality of the material that constitutes the fabric, the process of manufacture, and the method of applying the plaster.

For three-quarters of a century prior to the last decade, a wire lathing was quite extensively used in the construction of high-class structures in Europe and America, especially in the United States. These structures have been replaced since by larger and more modern buildings and in the process of demolition, it has been found that this wire meshing was in apparently as good a state after thirty or forty years, as when installed.

A couple of years ago, the Fifth Avenue Hotel, on Broadway, New York, was demolished to make room for a commercial structure, and the wire lathing there was found in as good a state of preservation as when installed, fifty years previous. A year or so previous to this, the Boston Theater, then one of the oldest buildings of its kind in the United States, was demolished, and the wire lathing there was found in excellent shape. Now, why was this lathing practically imperishable in these buildings? The reason is that, the strands of the mesh were thoroughly imbedded in the plaster slab. Metal lathing should be properly protected from rust before installation by a coat of paint or, preferably, of zinc or galvanizing, then thoroughly imbedded in the plaster.

This wire mesh was exclusively used in the United States until about twenty years ago, but the consumption was naturally curtailed by the comparatively excessive cost over wooden lathing, until



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ingenuity conceived the idea of manufacturing what appeared to be a wire mesh out of high-class sheet steel. This was the birth of expanded metal, which has revolutionized lathing and plastering in recent years, and made possible the erection of thin fireproof partitions, suspended ceilings, and a thousand and one utilities, where heretofore they had been great problems.

Great care should be exercised, however, in selecting the quality of the lathing. If circumstances will permit it, galvanized lathing should be specified in all cases, more especially in Western Canada, where wood fibers and gypsum plasters are used.—Contributed.

Use of Sawdust Concrete.

Sawdust concrete has been used in the new Public Library building at Springfield, Mass., as a base on which to lay the cork carpet covering the floor. The object of the sawdust concrete was to obtain a layer into which nails could be driven and which at the same time would hold the nails. The company that laid it states that it accomplished both these purposes. If it had not been used it would have been necessary to lay the usual wooden floor, on sleepers and a cinder fill, between the structural slab and the cork carpet. The mix originally specified was 1:2:2, one part cement, two parts sand and two parts sawdust; but before applying it the contractors decided to experiment with various proportions. It was found that the 1:2:2 mixture would not set and after a couple of weeks could almost be blown away by the wind. Further experiments led to the conclusion that a 1:2:¾ mix, three-fourths of a part of sawdust, would give proper results and 5,000 square feet of this mixture were laid. The thickness of the layer was 1 inch and after four months of service indications are that the material is successful. No cracks developed, says Contract Record, even in strips as long as 125 and 150 feet, except at the joints at the end of a day's work. At some of these points cracks opened to a width of ¼ inch.

For Securing Dry Cellars.

In localities where a porous or sandy soil exists to the depth of six or more feet, cellars are usually dry without the use of any preventative to dampness; but where compact soil exists, usually about 80 per cent of all cellars are subject to dampness, as few have been waterproofed. While concrete is subject to dampness like brick and stone it is more readily waterproofed than those materials, as those who have done work below the water line know. Damp cellars cause sickness, it goes without saying, and while cellars may be made more cheaply by not using waterproofing the ultimate cost is greater in doctor bills.

A monolithic wall below grade is cheaper and stronger than any other kind of wall, and when waterproofed on the outside and on the top it will insure dry walls. It, however, causes water to remain on the outside, which is also injurious to health; and nothing but proper drainage will overcome this evil.

Perhaps the best method of securing the necessary drainage consists in loosely placed rough rock near the wall with a 4 or 6-inch porous drain tile, joints not cemented, placed in the bottom of the trench. The drain tile must have no less than 1 foot drop in 20 feet. This size of drain pipe is sufficient for buildings up to 60 feet in length. In localities where clay soil or hardpan are found it is necessary to place another drain 6 feet from the wall in a trench of sufficient depth to be free from frost. This drain is also covered with cinders or brick bats, allowing space to cover with soil of sufficient depth to give nourishment for the lawn. In no instance should the drain next to the wall be below the cellar floor level, while the drain in the lawn may be just below the frost line. The cellar and conductor pipes should be made of socket sewer pipe, well cemented at the joints, and have a trap at every opening on the inside of the building, and one trap after all connecting drains have been entered into the outlet. This trap must have a vent to allow the escape of gases.

There are two kinds of waterproofing, one variety is the kind mixed with the cement dry, before it is used in the concrete or in the finishing surface of the floor. Another kind is used for application to walls after they are set. In every case full directions are given for their use.—Cement World.



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Making Cement Lumber.

An effort is being made to introduce cement lumber, and the means whereby it can be used for exterior and interior walls for residences, hotels, stores, garages, factories, stables, etc., at no greater cost than wooden siding. It can be sawed like ordinary lumber and the same architectual effect accomplished with it, and its superority in appearance and endurance universally admitted. It is fireproof and practically time-proof—it does not begin to show depreciation from the minute the job is completed, like wooden siding—it does not call for that continual upkeep expense in the way of painting, but it can be painted any desired color. Contemplate a residence with wooden siding located next to the one shown above—think of the difference in their selling price, of their rental value, of the difference in their upkeep expense for 15 or 20 years, of the difference in their selling and rental values 10 years hence, of the difference in the satisfaction and comfort of living in them, the cement lumber house being much warmer in winter and cooler in summer, more healthy and practically fireproof. Cement lumber is very inexpensive—cement plaster can be had in every town—any mortar maker can make cement lumber and any person of ordinary intelligence can learn in five minutes how to make it. Simply mix the mortar and pour it in the moulds and in a few minutes it is hard enough to take out and put in the wall, in sizes of ½ square yard by one inch thick — the labor cost should not exceed two cents per square yard —the moulds are very easily made and inexpensive — $5.00 is sufficient to pay for labor and materials for moulds for any ordinary job and not 10% of the lumber is wasted—100 pounds of stucco with two parts sand makes four yards of cement lumber one inch thick—the iron tie stud costs two cents per foot, and it can be nailed on the wood studding and the cement lumber attached, forming the wall for not exceeding four cents per square yard (the tie studding is shipped punched ready to receive nails). These are the elements of cost to the point of plastering and that varies in different localities and is dependent upon whether a smooth or rough finish is desired. For interior walls, stucco and wood fiber (100 pounds of stucco and seven pounds of fiber) is preferable to stucco and sand as the weight is much less, is a better sound resister and costs but very little more and works up more easily—this combination makes three square yards. Plaster for cement lumber should not have any retarder in it. Waterproof paper nailed to the wood studding before attaching the tie stud and cement lumber provides against any possible dampness.

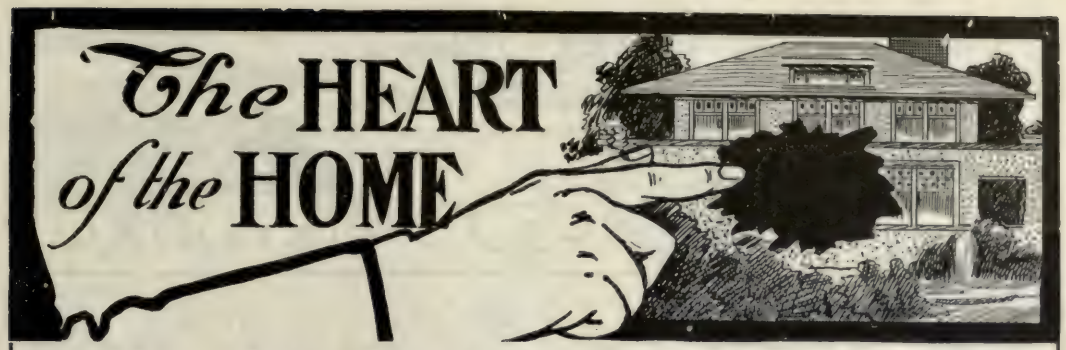
For handsome residences any desired finish of plastering can be had, for inexpensive houses only a thin coat is required. This form of construction is especially desirable for stores and other kinds of buildings, in sections of cities and towns where only non-combustible materials can be used and the rental values will not warrant expensive buildings, and in all cases where fire is likely to communicate from point of origin to other buildings.

The tie stud is made of galvanized iron and is punched ready to receive the nails and is shipped in 10-foot lengths, but can be cut to any length with a chisel—this tie stud is nailed directly to the wood studding on 16-inch centers. The tie stud properly attached, ordinary labor can erect the cement lumber by putting it in place and hammering over the bendable prongs of the tie stud—the wall is then ready for plastering.

The moulds are simply long box-like tables, with sides and ends one inch high attached with hinges—the bottom, or table proper, should be of material that will not sag and be straight and level. This long mould is then divided into as many small sections as its length will permit by tacking one-inch strips across it, making these small sections 40½ inches long, so that each unit of the cement lumber is one-half square yard. Moulds should be cleaned after each operation.

A Good Cement Crack Filler.

For filling large cracks in brick or stone walls mix up and strain some old paint and pot cleanings, and add enough cement to make into a putty that will not stick to the hands; or add whiting and cement in equal proportions.



The Heart of the Home is Where You Live---The Inside---Within the Interior Walls and Ceilings.

Whether *you* secure a home-like, cozy, quality-lined interior—sanitary and health promoting—depends upon the materials you select for the construction of *your* walls and ceilings.

SACKETT PLASTER BOARD as your lathing material, and U. S. GYPSUM WALL PLASTER in combination, makes a solid wall of Gypsum, and so far superior to the flimsy, fire-trap ordinary construction that there can be no comparison. Sackett Plaster Board does not swell, shrink, or buckle; protects the building from fire and sound—avoids plaster cracks, lath stains and future repair expense. Insulates *you* against the winter's cold and the summer's heat, adding real comfort to your building. And it is good for any building, large or small.

You simply cannot afford to build without investigating the merits of Sackett Plaster Board and U. S. Gypsum Plaster. Write at once for Booklet "K"—yours without obligation.

UNITED STATES GYPSUM COMPANY

NEW YORK CLEVELAND CHICAGO MINNEAPOLIS SAN FRANCISCO

Glidden's Concrete Floor Dressing



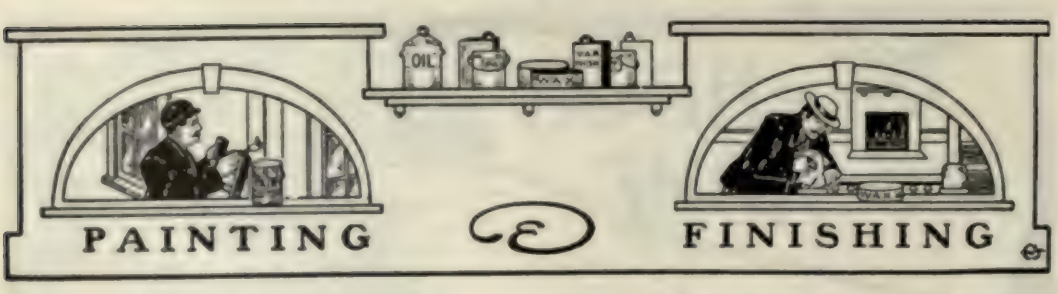
THIS is the material that protects concrete floors against abrasion and wear, and against the absorption of moisture, oil, grease and disease germs, and makes them sanitary and beautiful. It is made in Light Drab, Dark Darb, Terra Cotta, Tan, White and Transparent. It is the most satisfactory material made for concrete floors and

Better Than Paint For Wood Floors

IT is easily applied with a brush and any painter can use it. Let us send you our free book on the subject. It contains valuable information, and is beautifully bound in limp leather.

The Glidden Varnish Company

FACTORIES: Cleveland, U. S. A.; Toronto, Canada **BRANCH WAREHOUSES:** New York, Chicago, London



Colonial Decorations.

(From the Spectrum.)

IN decorating the Colonial interior the characteristics of this style should be maintained as closely as possible, keeping the keynote of simplicity constantly in mind, for it is only by having the decorations to conform with its architectural features that this distinctive style can be fully appreciated.

Light colors are best, as the white woodwork tone is more satisfactory in combination with the lighter wall effects. Soft yellows, green, rose, gray and blue are characteristic of the Colonial interior, while rich reds, dull dark blues, orange, green and browns predominate in hangings, upholsterings and rugs.

A dull, flat paint is best for the ceiling and is also favored for the walls, although a figured or two-toned wall covering can be introduced. The latter, however, is not suitable in the moderate-sized Colonial home and will be little discussed. Tapestry papers, reproductions of old prints, seem favored, but do not permit of the use of pictures or other decorations which require a flat or at least unobtrusive background. A flat-tone or blended treatment permits of more freedom in furnishings and allows of the introduction of stenciled border decoration which is in keeping with the simple flat surface effects.

The open stairway in the hall is an important feature and its parts should be properly finished. The hand rail and treads are best in the mahogany with the other parts white enameled. The low-paneled wainscoting is often used in the hall as well as in the dining room, while a solid wood wainscoting for the lower wall is frequently used in library or living room. The latter can be treated in mahogany as well as white or ivory. The lighter, warmer tints are essential in the rooms which are not well lighted, so that a living room would not be appropriate in blue if the plan of the home does not allow of more than one exposure, and that unfavorable. Rose or old gold would be advised under such conditions, while dull blue will be very appropriate in the sunny, well-lighted library. As a quiet, dignified appearance must be produced in this room, a rich deep tone of blue should be combined with the mahogany woodwork, paneled if possible the height of the bookcases.

The second floor should be treated in simple flat wall tints introducing figured materials for hanging. Here lighter blues, flat-tone pale azure or pearl gray, also rose, such as flat-tone shell pink, as well as the following flat-tone shades: silver gray, lichen gray and old gold, are suitable, while the decorations with stencil borders can suggest or repeat the pattern of the cretonne, taffeta or chintz hangings.

With the light woodwork finishes it is advisable to retain the natural tone of the wood used on the floors in order to avoid strong contrasts or give undue prominence to the floor itself.

Painting Galvanized Shingles.

A painter writes to ask what can be done to a roof covered with galvanized iron shingles from which the paint is coming. He was told by an old painter that a coat of asphaltum over the old paint would hold it on. But it won't. On the contrary, it will only help to make matters worse. Asphaltum is not fit to coat such a roof with. The only thing to do is to remove the old and perishing paint by scraping off as well as possible; then apply a fresh coat of good lead paint, to which add a trifle of varnish after thinning with turpentine mainly, which will serve as a binder. In the first place the shingles ought to have been sized with the following: To one gallon of water add two ounces each of copper chloride, copper nitrate, sal ammoniac, and muriatic acid, mixing together the three first-named articles, then slowly stirring in the acid. Apply a coat of this, and let stand until dry. Then brush off loose pow-



Did you ever look out of your window at a friend who has stopped in front of your house? When the eyes of that friend are raised and your house is scrutinized, have you ever felt just the least little bit of a twinge, as you remember that your house is in need of paint?

While an unpainted exterior does not always mean a shabby interior yet the first impression that one gets from the outside of the house is oftentimes lasting.

And if the interior of the house, too, is in need of painting, if the wood-work is a trifle dingy or the walls in need of touching up, the impression gained by that casual glance at the outside of the house is strengthened.

Save yourself that momentary twinge and that impression upon your friend by keeping the house well painted inside and outside with Dutch Boy Painter white lead and pure linseed oil paint.

We have some very interesting booklets on the subject of paint and painting, showing harmonious color schemes for both interior and exterior. They will be sent to you free for the asking. Send to our nearest branch for "Paint Helps 0664."

National Lead Company

New York Boston Buffalo Chicago Cincinnati
Cleveland St. Louis San Francisco
(John T. Lewis & Bros. Co., Philadelphia) (National Lead & Oil Co., Pittsburgh)

der, and it is then ready for the paint. Apply any ordinary paint.

Paint It Every Year.

Down East, in New England and more particularly in Maine, painting is an annual function. The famous white houses with the equally famous green shutters are thus made new every year. True, the salt air of the Atlantic is a bit trying on paint. But that is not all. The coast population is composed largely of sailors, retired sailors, or the descendants of sailors. The sailor, for generations back, has painted his ship every year. Ashore, he clings to the practice. He has an unconsciously inherited knowledge of the value of paint, which he imparts just as unconsciously to the entire community. That is a striking instance of paint education. But, inland, it's necessary to educate property owners to the value of protecting their houses against the weather, just as the experience of ages has educated those who go down to the sea in ships.—The Building Age.

Amount of Paint for a Given Surface.

It is impossible to give a rule that will apply to all cases, as the amount varies with the kind and the thickness of the paint, the kind of wood or other material to which it is applied, the age of the surface, etc. The following is an approximate rule: Divide the number of square feet of surface by 200. The result will be the number of gallons of liquid paint required to give two coats, or, divide by 18 and the result will be the number of pounds of pure ground white lead required to give three coats.

Hints on Painting of Exteriors.

As a town is made up of individual houses each must bear its part in making a picture that is artistic and pleasing when taken as a whole. Regardless of what color is chosen, do not paint in rainy, damp or dusty weather.

The newest style of painting for outside work is to use only one color, except as to sash and doors. The work is easier done in this way, and it looks just as well as the old style.

Pure white is beautiful, but hard to keep clean. For that reason many take cream as the next best. Some prefer dark paints, and they cover up the defects of an old house. It is all a matter of individual taste. Ruskin said that the best painters delighted in bright colors, and those who took the wrong course spread dismal shades on their canvas.

In all cities there ought to be a sort of a color matcher in the building department who would give the choice of several hundred shades, but would draw the line at some of the lurid kind that hurt the eyes. Or a color card might be kept that would give so large a choice as to leave no cause for dissatisfaction and yet keep out some that are too coarse for a newly started mining camp.

There should always be three coats on the outside of a new house, especially if a light color is used; but two are often made to serve.

Shellac.—On paint work all knots must be shellaced before any paint is put on. This stops the flow of resin. It will flow over the finished surface, in some cases, if this is not done.

Priming.—Use lead and oil for priming or first coat. This is the best material for all coats. Some painters like ochre, but others will not use it. The other is safe. But on tin, galvanized iron and metal do not use lead and oil, but mineral. Lead and oil scale off the metal after a time. This applies to the first coat only. The other coats may be of the same material as is put on wood. Copper is not painted. This warning is sometimes required. Sheet metal should be painted on the underside before laying. Puttying should never be done before the priming. The raw wood sucks the oil out of the putty and it dries and drops out.

Alternatives.—Some prefer zinc white to white lead, and raw linseed oil to boiled. The boiled is used seven times out of ten. Very little, if any, turpentine is used on outside work.

Shingle Stains.—These are of many kinds. Green is the most expensive. Black seems to be the favorite. The soft green is beautiful, but there are many coarse glaring greens that should not be used on a good house. The stain does not cover over the pores as paint does. It sinks into them, fills them, but still leaves the grain partly visible.

Sometimes the whole house is stained instead of painted, especially if the walls are shingled.—From the Building Age.



Our Beautiful Booklet, "Pergolas"

Illustrated with views of some of the most attractive new homes and grounds showing exceedingly artistic results in pergola treatment. This booklet is right off the press, and is yours for the asking. Send for catalogue G27 of pergolas, sun dials and garden furniture or G40 of wood columns.

Our illustration shows the attractive effect that can be obtained by adopting pergola treatment for your garage This adds but very little to the cost of the building and makes it an attractive feature of your general landscape scheme instead of an eyesore, as it frequently is.

Proportions in columns make or mar the success and artistic effect of the pergola That is why a pergola built with

Koll's Patent Lock Joint Columns

made in classic proportions, will insure your getting a charming and beautiful pergola. They are equally suitable for porches or interior work and are made exclusively by

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DO YOU WANT THE BEST?

Royal Round Hot Water Heater.

Royal Sectional Steam and Water Heaters.

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The use of good prepared paint is economy. It covers more, looks better and wears longer than cheap mixtures or hand-mixed lead and oil.

There is no better paint than Sherwin-Williams' Paint (prepared) sold everywhere under the name

SWP

It is a paint for the outside of buildings that will stand exposure, hold its color and preserve the wood. SWP is the result of forty years of paint making. You can depend on it.

As to the color scheme, write for our portfolio of exterior painting showing many attractive color combinations suitable to all styles of houses. It's *free*.

SHERWIN-WILLIAMS

PAINTS & VARNISHES

Address all inquiries to The Sherwin-Williams Co.
629 Canal Road, N. W., Cleveland, Ohio



Heating, Lighting and Plumbing



Things the Home Builder Should Know About Gas and Electricity

By CHARLES K. FARRINGTON

FEW householders realize how important it is always to purchase gas and electrical apparatus that will operate economically. This applies to many devices in every day use, such as gas stoves, electrical motors of various sizes used to operate fans, sewing machines, washing machines, vacuum cleaners, etc., and also many kinds of electrical heating apparatus such as chafing dishes,. stoves, frying pans, toasters, irons for laundry purposes, etc. Many people have no idea of the large amount of money which it is possible to lose each year from lack of care in these directions. It is often possible at the start to make a slight saving by purchasing inferior goods, and soon to expend many times that amount in operating them. For example, how many purchasers of a gas stove ever select a stove with reference to the amount of gas it will consume when it is in operation? Do not most people simply select a large enough size to do properly their cooking, with no thought as to whether it will do the work economically? When a gas stove is purchased you should examine several, and select the one which will burn the least amount of gas, irrespective of the initial cost. Find out from the maker or agent what the stove is rated to burn per hour when operating, and any other similar details, before placing your order. It will pay you well to take every precaution.

What has been said as regards gas stoves would apply equally well in purchasing any of the electrical devices mentioned at the beginning of the article. Find out how much current will be consumed by the different makes before you purchase, and do not make the controlling factor the price of the article itself. It is the cost of operating that you are anxious to plan for, and carefully designed apparatus consumes a far less amount of current; therefore always buy it even at a greater cost.

But another very important item to remember is, never to purchase a larger sized article than is necessary for the work you wish to do with it. For example, if a five pound electric sad iron is heavy enough for your laundry work, do not allow yourself to be sold a six pound one. The following table shows how **little** difference there is in the cost of the **various sizes**, and how **much** difference there is in the cost of **operating them.**

4 lb. size, cost $3.75; expense to operate, two and one-half cents per hour.



(Lamp illustrations from designs of The Handel Co.)

Big Book On Hot-Water Heating

OUR big, portfolio book contains 72 pages of information of great value to everyone considering installing a heating plant in a new or old home. It is prepared from the experience gained through 25 years of contracting, manufacturing and designing heating plants for all classes of buildings from modest cottages to the largest public and private buildings. It shows in detail and with fine illustrations what we have done on these various kinds of jobs, some one of which may be similar to yours.

$274



The Andrews Hot-Water Plant in this South Dakota 8-room home cost $274. In satisfactory operation for several years.

From It You Learn

how we cut, thread and ream all pipes to fit perfectly; how fittings, radiators, boiler, etc., are made ready; how all parts are tagged and crated ready for shipment and how our instructions are made so simple and clear that any handy man can set up the plant.

Two styles of steel boilers as well as cast iron boilers are described and illustrated, and their large amount of heating surface is shown. The kind of grate which experience has shown to be the best, as well as styles of ornamental radiators for various uses, are fully described. You can easily understand the fuel economy of these boilers after studying their construction and the diagrams which show what fuel-saving means to you.

Andrews Regurgitating Safety Valve

a wonderful device which makes the radiators 50% hotter in cold weather, is explained. Stops "boiling over." An exclusive feature with Andrews Systems.

Photographs of hundreds of residences, business blocks, etc., using Andrews Plants with satisfaction, are shown as well as a list of thousands of users from every state in the Union. Write for this Big Book before buying any heater and send plans for estimate. Both are free. Please send also the names of your acquaintances who might become purchasers.



Andrews Thermostat

This is the simplest temperature regulator on the market. A small, very neat Thermostatic Thermometer in the living room governs a basement motor which in turn opens and closes the dampers at changes in temperature. Saves fuel and all the bother of fussing with dampers. Only $20 direct or through your dealer. **Guaranteed for Life.**

Andrews Steel Boilers

The two styles of Andrews Steel Boilers, vertical (shown in cut in center of ad.) and locomotive, are the highest types of hot-water boilers. They are made of steel-plate like power boilers and their very large fire travel together with the close proximity of fire and water make them heat quicker than any other boilers on much less fuel. A child can clean either style in a few minutes. Average annual cost of coal $3.00 to $5.00 per room.



Cast Iron Boilers



Andrews Peerless Cast Iron Boilers have been widely used for a number of years and give fine satisfaction. A number of features not found in other cast iron boilers make them very efficient and the most substantially constructed on the market.

Andrews Plant
(Vertical Boiler)
All tagged and boxed ready for shipment.



Estimates Free

For Old or New Houses

It is nearly as easy to install an Andrews Plant in an old house as in a new one. Just give us a rough sketch or architect's plans of your floors and basement, showing sizes, windows, doors, height of ceilings, etc., and our engineers will figure out the exact cost of a plant to give best efficiency under your particular conditions.

We Do It Right In 44 States

360 Days Free Trial

Guaranteed By Bond

You take no risk in buying an Andrews Plant or any Andrews Equipment. If at the end of 360 days trial you find it other than as represented we will take it back and return you your money in full.

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Other Lines of Modern Equipment Sold On "Cut-To-Fit" Plan

As our business grew, we have added various features of home equipment in each case choosing the very best line on the market. Several products are Mr. Andrews' own inventions and his superior engineering skill is much in evidence in each. These systems are sold all cut to fit, ready to erect, or individual parts will be sold separately.

Air-Pressure Water Supply

This system is particularly desirable for country homes or any place where "city water" is not obtainable. A steel tank in basement or any out-of-the way place in house, furnishes running water to any part of the house as well as affording fire protection. No freezing or getting out of order. State capacity desired when writing for prices.



Sold Direct Or Thru Dealers

"Knock-Down," ready to screw together

The only special tool necessary is a pipe wrench which every home owner should have.

Sewage Disposal

The Septic Tank is one of Mr. Andrews' own inventions. A small steel tank placed underground just outside the basement treats the sewage in such a manner that it becomes purified and passes off into a drain bed. An almost indispensable device for any home not having sewer connections. Cheap and lasts forever. State size of house and grounds when writing for estimate.



Plumbing

The Andrews Plumbing line is complete of the very best material. Complete plans and instructions for erecting accompany each order. Pipes are cut to fit, threaded, etc., so that any handy man can easily erect. Write for estimate.



Good For $5.00

To check up the people who buy from this ad, it will be accepted as payment of $5.00 on the price of a hot-water heating plant sold direct or through a dealer.

5 lb. size, cost $3.90; expense to operate, three and one-quarter cents per hour.
6 lb. size, cost $4.00; expense to operate, four cents per hour.

The above prices are based upon a rate for electricity of ten cents per kilowatt hour, which is the usual rate charged for electricity for household purposes throughout the country. But to avoid technicalities the writer has given the cost of operating in **cents per hour** so that the figures will be clear to the non-technical reader. Let us suppose, for instance, that a person has a six pound iron which is used for work upon which a five pound one would be sufficiently heavy. As noted in the table, the additional cost of operating the six pound over the five pound is three-quarters of a cent per hour. Assuming that the iron will be used on an average of ten hours per week, in only one year the amount of money wasted would be $3.90, enough to purchase a five pound iron, which will of course waste no current as it is the size necessary to do the work. Let us next consider the electric fans which are so much used in the summer time. An eight inch size costs one-half cent per hour to operate. A sixteen inch costs slightly over one cent. If the smaller size is sufficient for your requirements it is of course extravagant to use the other, but the average person does not know how much difference there is in the cost of operating; consequently large sized fans are often used where a smaller size would give sufficient breeze for the room in which they are placed.

Electric lights are also often a source of needless expense if the right sizes are not used. For ordinary household purposes "sixteen" and "thirty-two" candle power lamps are employed. As **both** sizes fit the **same** sockets I often find thirty-two candle power lamps used where sixteen candle power ones would give sufficient light for much less cost. But again, I sometimes find ceiling lights, with a fixture using a number of small lamps, when a few large ones would give ample illumination at a decided saving in current. Each householder must govern the sizes he uses to suit local conditions. The candle power of each lamp should be upon it.

While speaking of lamps I should mention the new "metal filament" lamps which are now so extensively used instead of the old style "carbon filament" ones. The first cost of the lamp is greater, but not excessively so by any means, and the additional outlay is soon made up in the reduced cost of operation, for it is possible to obtain a far greater amount of light with them for the same amount of current. For example, a thirty-two candle power carbon filament lamp takes from one hundred to one hundred and fifteen "watts" to operate it properly. A "metal filament" lamp which takes only forty "watts" will give the **same amount** of light. Figuring the cost of operating the thirty-two candle power carbon filament at one cent and one-tenth per hour, or eleven-tenths cents, and the 40 watt "metal filament" at four-tenths of a cent it is obvious that the "metal filament" lamps make a saving which it is well worth while to make use of, since for an expenditure of only four-tenths of a cent you obtain the same amount of light that you formerly paid one and one-tenth cents for. The color of the light given by the "metal filament" lamps is good indeed, being perhaps the nearest approach to sunlight that has been obtained thus far, and the light is therefore excellent to use. If you have your home lighted by electricity it will pay you to look carefully into this matter. The lamps are manufactured by a number of reliable companies, and if carefully handled will give good satisfaction.

The writer trusts that what he has said will enable the householder to make a good yearly saving. The high cost of living these days makes it very necessary that economy should be practiced in every possible way. The examples could have been greatly multiplied if it were not for lack of space, but those given were carefully selected, and may be considered typical. What has been said about them would apply in a general way to all types of apparatus. The reader can figure to make a saving by using the methods given, no matter what form of appliances he may have in his home.



White House, Washington, D. C.

Going to Build ?

Not so much the fact that **NEPONSET** BUILDING PAPERS were used in the White House, but the reason why is what interests you.

And that was because they keep out dampness, draughts and noises permanently.

But let us send you booklet with full description.

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A COZY FIREPLACE
FOR YOUR HOME

Send for This FREE BOOKLET Telling How to Get and Install Any Design

The fireplace is the heart of the home. No house is really a home without its cheery blaze on winter evenings. If you are building or thinking of remodeling, you owe it to yourself to send for our beautiful booklet, "Home and the Fireplace." It tells all about **Colonial** Fireplaces—the only real advance in fireplace construction in the last century—all about the **Colonial** Plan, which makes obtaining a fireplace as simple as ordering a picture. It contains beautiful illustrations of **Colonial** designs, and tells how you can have a special design made free of cost. **Colonial** Fireplaces are adapted to any fuel. They radiate a full warmth all over the room. No inconvenience—no dirt—absolutely **all** smoke goes up the chimney. The only up-to-date fireplace. Recommended by leading architects. **You need this book—write today**—just send us your name and address—but we suggest you write at once. Just drop us a line right now. (16a)

COLONIAL FIREPLACE CO., 1771 W. 12th St., CHICAGO

HESS Sent on Approval FURNACE



No. 45 "Leader" Hess Steel Furnace
Price $49
Delivered East of Omaha and North of Ohio River. Pipe and Register Extra

We will deliver a complete heating equipment at your station at factory prices and wait for our pay while you test it during 60 days of winter weather.

The entire outfit **must satisfy you** or you pay nothing. Isn't this worth looking into? Could we offer such liberal terms if we didn't know that the **Hess Furnace** excels in service, simplicity, efficiency, economy?

We are makers—not dealers—and will save you all middlemens' profits. No room for more details here. Write today for free 48-page booklet which tells all about it.

Your name and address on a post card is sufficient.

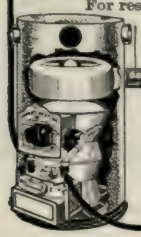
HESS, 717 Tacoma Bldg., Chicago

EASY TO BUY $10 DOWN AND $10 A MONTH

Our monthly payment plan makes it easy for anyone to have the best heating system. Buy direct, save the dealer's big profits and excessive charges for installation and repairs. Saves one-third to one-half the cost.

JAHANT Down Draft FURNACE

For residences, schools, hotels, churches, etc.



Sold Under a Binding "Guaranty Bond" to give perfect satisfaction after 365 days' use or money refunded. We send complete outfit—furnace, registers, pipes, special blue print plans, full directions and all tools for installing. So easy to install a boy can do it.

OUR FREE CATALOG

Explains the patented Down Draft System fully, tells why it gives more heat and saves half the cost of fuel. Write for it now.

The Jahant Heating Co.

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MAJESTIC FOUNDATION COAL CHUTE



¶ Protects the building just where most needed — above the opening. ¶ The heavy steel hopper catches all the coal.



¶ When not in use, the hopper lies in the bottom of the chute body. ¶ The door locks automatically either open or closed. Strictly burglar-proof. ¶ With ¼-inch wire glass or steel panel in door.

Write for circular and address of nearest dealer.

MAJESTIC FURNACE CO.

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SPLINTERS AND SHAVINGS

Workingmen's Homes in New Zealand.



IN accordance with an act passed in December, 1910, the government of New Zealand is now putting into operation a plan for the sale to workmen in cash installments, of dwellings especially suitable to their use.

Any persons, rich or poor, may secure a government loan for the building of a home, under the plan of advances to settlers, but such loans cannot be for less than $121.66 or for more than $14,600. Applications for loans not exceeding $2,433 have priority over applications for larger sums. Mortgages are repayable by half-yearly payments of principal and interest combined. They may also be repaid in whole or part at any time. Interest is charged at the rate of 5 per cent, reducible to 4½ per cent provided payment is made not later than fourteen days after due date and no arrears in respect of installments or other payments under the mortgage remain outstanding.

Construction of the Dwellings.

Workers' dwellings under the new act may be built of wood, concrete or brick, but the total cost must not exceed $2,920. The department of labor has recommended to the workers that they choose houses of ferroconcrete, for although they cost somewhat more than wood (approximately $30 per dwelling), this extra cost is more than compensated for by the extra durability, the saving in cost of maintenance and insurance.

I visited some of the workers' dwellings in Wellington constructed under the terms of the act of 1908, and found concrete and wooden buildings side by side. The concrete dwellings present the best appearance and give the best satisfaction, especially as regards saving in fire insurance.

The total number of dwellings erected under the act of 1908 was 127, of which all but 9 had been leased up to recent date. These dwellings are located in the four leading cities of New Zealand and cost between $1,945 and $2,675 each.

Description of Two Types Planned.

The new houses, whether of wood, concrete or brick, are intended to be substantial, comfortable and inexpensive, but not without ornamentation of a quiet character. The following is a description of five types of houses as planned by the government architect:

First—A dwelling of four rooms with conveniences, a scullery 7 by 12 feet being counted among the latter. There are two front rooms about 12 feet square, a living room 16 feet 4 inches by 15 feet 4 inches which contains the range fitted with hot water apparatus, a bed room 12 feet by 9 feet 6 inches, and a reasonably large bath room. The front door leads to a hall 4 feet wide and at the back is a lobby containing a coal bunker under shelter. The washhouse, with copper, has two fixed tubs. Price, $1,380 to $1,825.

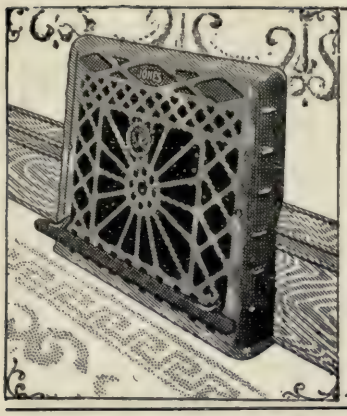
Third—Four rooms; this is distinctive in having a veranda along the whole front, and it will probably be popular because it is of the familiar "square" type of architecture beloved in the colonies. Three bed rooms (one with a fireplace and suitable for sitting room) are 12 feet square, while the dining room is 12 feet by 11 feet 4 inches. Price, $1,350 to $1,700.

TAX FIXED SIZE OF BRICK.

How Uniform Dimensions Were Established in England Long Ago.

Taxation is responsible for the standard size of bricks, and if they were generally larger it would save time and labor, contractors say.

In England, when bricks were first made, and up to sixty or seventy years ago, there was a tax on bricks. To evade this, bricks were made of larger and larger sizes. These were used for cellars and other concealed places. To stop this fraud an act was passed in the reign of George III fixing the legal size of bricks. Early in Queen Victoria's reign the tax



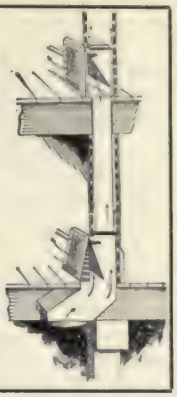
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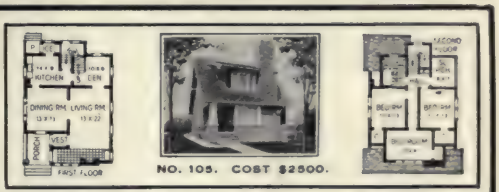


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was taken off and bricks may now be legally made of any size whatever. But any change from the standard size would bring about great inconvenience. All calculations are made for building on this standard size, and the London and other building acts have practically fixed it.

As for Minneapolis, however, bricks of larger than the standard size are in common use, the increased size giving an effect pleasing to many builders. The new Saint Paul hotel is an example of the effect of the large type. Bricks are frequent in Minneapolis which are thinner and longer than the standard common brick, as well as thicker, or shorter and thicker.

Tiles on the Porch Floor.

As you step from the walk or lawn to the porch of your house the material that seems to be most natural for the covering of the floor is tile.

Tile is related to the earth. It is made from clay, subjected to tremendous heat until it becomes vitrified, but still its source is the earth. Therefore it is a natural connecting link between the house and garden.

There are only two reasons why you use wood for a porch floor instead of tile. One reason is that tile may never have occurred to you, and may not have been suggested by the architect or builder. The other is that you may think tile costs more than wood. The purpose of this article is to suggest that tile is not only an attractive material to use for a porch floor, but it is absolutely the best from every consideration and from every standpoint.

The idea that tile costs more than wood is true only as to the first cost. A tiled floor once laid lasts forever. A wooden floor will wear out in a comparatively short time, exposed as it is to weather. A tiled floor requires no treatment after it is once laid. A wooden floor has to be painted and repainted more frequently than any other part of the house. A tiled floor offers more attractive colors than can possibly be obtained by the use of paint upon wood.

It is not only the color of the tile that is attractive; it is its texture. It is not only pleasant to look at; it is pleasant to walk upon. It suggests coolness in summer when porches are most used.

It has been used for the floors of porches, entrances, vestibules, loggias and terraces from time immemorial. Tile is one of the oldest building materials made by the human race, and it is today one of the best.

A porch should be attractive. It should be a comfortable retreat for rest and recreation. Its accessories should help to this effect. The cool, inviting texture of a tiled floor is one of the means to this end. The change from the house to the garden is made less abrupt by the use of tile, a material so akin to the earth.

Tile lends itself to every architectural scheme and offers a range of colors unequaled in any other material. A porch must be kept clean. It needs constant scrubbing. A wooden floor can not be scrubbed as clean as a tiled floor, and it takes longer to dry. A tiled floor can be made absolutely clean. It can be flushed off with a hose any time. It is easier to sweep on account of its smooth surface.

If a porch has trees in tubs or flowers in boxes, there is no annoyance from water which may be left upon the floor. It will not do the harm that it would on a wooden floor.

The floor of the vestibule should be of the same material as the floor of the porch on which it opens. The same reasons that apply to tile for porch floor apply to the vestibule floor. Even if there were no other reasons for using tile than the reason of its great attractiveness, this would be sufficient reason for the home builder, because it is one of the first qualities of a home that it should be attractive. But the attractiveness of the tile is one of the least reasons for using it. The greatness of its attractiveness is overshadowed by its wonderful utility. The human race has not used tile for 3,000 years except that it has been found very valuable for building purposes.

One would hardly build a house without a porch. Consider very carefully before you build, this question of tile for your porch floor. Roughly speaking, a tiled porch or vestibule costs from 40 cents upward per square foot.—Construction Record.

KEITH'S MAGAZINE

ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

THE JOURNAL OF MODERN CONSTRUCTION
IDEAL HOMES MAGAZINE

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A CEMENT HOUSE IN AN ATTRACTIVE SETTING. (See page 81.)

KEITH'S MAGAZINE

VOL. XXVII FEBRUARY, 1912 No. 2



HAS THE QUALITY OF LIVEABLENESS.

New Types of Dwellings in the Southwest

FOR a number of years scarce anything was illustrated of southwestern architecture, except mission or Spanish types. The architectural publications were filled with plaster and stucco designs abounding in arches, courts and minarets. Then came the reign of the bungalow, and nothing but low one-story structures were to be seen. For some time, however, a more Catholic spirit in house architecture has slowly been gaining ground in even California, the home of patios and loggias, and everywhere is to be seen examples of a more varied architecture. A few of these newer types, taken at random, are here grouped together. While each dwelling shows individual treatment and distinctive features of its own, all are pervaded by one quality—that of hominess. This quality of livableness is subtle and not always easy to ascribe to any one particular thing. We feel it when present, and are aware of its absence. It often atones for real defects, from a strict architectural standpoint, and often a state-



HAS REPOSE AND AN AIR OF QUIETUDE



A SQUARE HOUSE RELIEVED BY INTERESTING DETAIL.

ly and perfectly symmetrical composition fails to attract us by reason of its lack of this essential charm.

The modest, unpretentious residence of moderate cost is generally more favorable to the expression of this quality of livableness than houses of lavish expenditure, though it is sometimes achieved even in these. Agar's prayer, "Give me neither poverty nor riches" is thus again happily the true one of the designer of homes. Happy is the architect who is thus unhampered either by the demands of the millionaire for statliness, or the limitations of a too slender purse.



CONVEYS A FEELING OF UNEASINESS AND UNREST.

The first illustration possesses to a marked degree this quality of livableness. Here, one can see, is a home. Perhaps it is due to the low, downward sweep of the roof, with its brooding, gathering embrace—perhaps its setting—right close to the ground and guiltless of a formal foundation wall. There are many minor features that please—the slight Japanese upturn to the edges of the deep roof cornice —like the young beauty's nose—"tip-tilted, like a flower;" the quaint little oriole hanging in the high, peaked roof gable; the interesting arrangement of the balconies and flower boxes in the front, and the effective contrast of the nearly white Arizona sandstone with the green shingle of the second story and with the green ivy which almost hides it in the pillars. The whole ensemble is pleasing and satisfying. While the second photo shows a plainer design and severer lines, they are given grace and charm by the extremely pleasing disposition of the openings and the treatment of the hooded entrance front. The coloring of the exterior, which is soft green, with white roof shin-

gle and white sandstone for entrance and chimney—at once attracts attention. The house has repose and a quietude that soothes like an old song. Its severity is tempered, too, by the growing things about it, which yet are kept subordinate to the dwelling. The third house is a San Diego home of dignified aspect on straightforward lines. The severity of the square outline is tempered and given a slight local color by the front loggia, with its symmetrical arches, vine-wreathed and filled with palms and ferns. The house itself is of light colored buff brick and brown shingle; the window treatment is unusually felicitous, the different openings varied, yet harmonious as a rhythmic chord.

It is a forceful and vigorous architecture, suited to almost any climate or locality.

The small house shown last faces east with plenty of windows to receive the sunlight.

The foundation is clinker brick, also the one heavy pillar supporting the porch roof. The rough siding is stained a soft green. The lines of this house are quite the opposite of those previously shown and convey a feeling of uneasiness and unrest. The composition is heterogeneous and inharmonious, a patching together of unequal and unrelated forms. Irregularity of form is not always picturesque or pleasing, nor is it so in this instance, where it is simply misused.



BUILT-IN CHINA CLOSET CENTERED ON WALL, WITH END SEATS.



THE SMALL HOUSE SERIES.



A Cement House in An Attractive Setting

By ARTHUR E. MARR

EDITOR'S NOTE.—In these days when the cost of building has, after all the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

AS all things change and pass through various stages of evolution, so it is with the house. There are more different types of construction today than ever before. Each one a representation of an individual taste. It is certainly the period of house expression. And yet, notwithstanding all this, whether it be the simple bungalow costing but a few hundred dollars, or the elaborate mansion with its outlay of as many thousands, there seems to be a growing demand for cement construction. It is with the above method this article deals, and the accompanying photographs depict an especially attractive house, a structure which, because of many unique yet eminently practical ideas in its construction, must appeal to a host of home-builders.

Whereas, the first cost of cement is practically that of wood under usual conditions, yet there are many points favoring the plaster, such as durability, saving in paint cost, fire resistance, adaptability to all sections wherever bags of cement can be shipped, and this point is especially important where the wood cost is high, and last, but not at all least, pleasing appearance.

The plans for this house called for serviceable construction, practical arrangement, ample room and good lines, all at a moderate cost. The photos and floor plans will make clear what was achieved, and the text how the results were accomplished.

Perhaps it may not be amiss to say here, this house has been pronounced by a builder of wide experience in house construction, to be the largest small house he has ever inspected, to contain more room space for its size, about nine hundred and twenty square feet, than any house he has ever seen.

The lot was located in Brookline, Mass., and, by the way, not by any means one of the cheapest towns to build in, and, having a greater depth than frontage, was utilized in an original way. The house was set back considerably to allow a better air circulation, and an improved outlook from the windows, uninterrupted sunlight, and to overcome the monoto-

nous sameness that a straight-front line of houses presents.

The house frame is the usual wood, and metal lath is used to attach the cement to. The outside dimensions are about twenty-five by thirty-five feet. The entrance is on the right of the house front, this being done so as to leave more space for a large living room. The vestibule, with coat closet, takes up little space, but serves its purpose fully.



THE WALLS ARE OF SCOURED PLASTER.

The first floor is divided into three rooms; the living room about fourteen by twenty-three feet, the dining room twelve by fourteen feet and a kitchen ten by twelve feet. The service portion has ample arrangement of closets, cupboards, etc., including a china closet.

The living room walls are of scoured plaster, and the result is both simple and pleasing. At one end of the fireplace with its wide brick hearth and flanked by a cozy settle and low book shelves gives a feeling of comfort and restfulness. The floors are of quartered oak and the standing finish cypress, while the walls are tinted a soft gray. The arrangement of the windows is very attractive and adds to an already pleasant effect.

The dining room has been treated somewhat as an alcove, a wide opening leading from the living room into it. This room has the same plaster, floor and wood finish as the preceding room. The problem of light has been most satisfactorily solved by a large bay containing six prettily designed windows, utilizing one entire end of the room, flooding it

with light and allowing unlimited air. From this room one enters the china closet, which is well supplied with drawers and cupboards. Continuing towards the kitchen one enters an entry, or what may be used as a pantry. It is well equipped with shelves and has a built-in ice chest, whose ice door opens from the outside. This entry also serves for the rear entrance vestibule. The kitchen comes next in order and has the usual arrangement of sinks, tubs, etc. Ample windows give good ventilation and light. The entire service portion of the first floor is finished with floors of Georgia rift hard pine and standing finish of North Carolina rift hard pine.



THE DINING ROOM IS FLOODED WITH LIGHT.

The second floor is divided into four chambers and bath, two of the rooms being about ten and a half by fifteen and a half feet, while the other two are about ten by twelve feet each. The chamber over the living room contains a fireplace, and this room, as well as the other three chambers and bath, are finished in white wood with floors of North Carolina rift hard pine. These four chambers are corner rooms and each one has two windows, one on either outside wall, affording excellent ventilation and light. The hall, with its linen closet, has floors the same as the rooms and the wood finish is of cypress.

The third floor, or attic as it is called, is divided into two rooms, a large studio with fireplace and a maid's room. This

floor is well supplied with cupboards and drawers, space being utilized to accommodate just such things as every housewife has, but frequently wonders just where they can be put. The floors and finish are of North Carolina rift hard pine.

The cellar is finished with cement floor and is supplied with the necessary coal bins and compartments and equipped with furnace.

And now concerning some of the original features in this house, practical features as several years' use has demonstrated. The room space has been saved wherever possible and as little space as is consistent with service given to passage ways and stairs. One stairs system was carefully designed to answer the three purposes of front, back and cellar stairway. This ingenious arrangement has saved much room and the graceful angles, especially where the staircase enters the living room, give an appearance of attractive simplicity which is indeed most pleasing. The arrangement of chimneys is interesting and unique, one chimney serving for the furnace, kitchen and three open fireplaces.

Especial attention was given to making the rooms really roomy, and, with this idea in mind, the placing of closets and staircase was carefully worked out, with the result that every room but one, and that one in the attic, are rectangular, and there are no unsightly jogs or closet walls jutting out into the rooms.

One of the knotty problems always arising in house construction where the building is to occupy small ground space, yet designed to be roomy, is the usual peaked-up effect. There must be a reasonable wall height in each story, and, when there are two and a half or three stories built on a little more than nine hundred square feet, the problem to keep the house down from being mistaking for a church spire becomes a problem indeed. In this case it was happily solved by ingeniously pitching down the eaves to the middle of the second story, thereby apparently reducing the height, and also actually giving more head room in the attic.

The complicated question of the house builder, can a small house with lots of room, a really good house, be built at a low cost? is answered most satisfactorily by a glance at the itemized account, but a penny wise and a pound foolish applies here as aptly as elsewhere; the last item, architects' commission, is really the keynote to the situation, for it is these added which stand between the homeseekers' purse and many building pitfalls.

The Cost Itemized.

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Lumber and Carpenter Work	2,169.97
Cost of House	$5,404.97
Architects' Commission 10%	540.50
Total Cost	$5,945.47

Substitute for Writing Desks

By MARGARET S. BEDELL

DURING the 18th and early part of the 19th centuries, a writing desk was a luxury, and one not always to be found even in the homes of the wealthy. One desk accommodated the family; a commodious desk it was too, usually of beautifully grained mahogany with innumerable drawers, both large and small, convenient cubby holes and slides, the possible secret drawer, quaint brasses, swell, double swell or box front, and the ball and claw feet; built to hand down from one generation to another, and today we pay periodical visits to all the antique shops of our acquaintance, search the country towns and visit isolated farmhouses in the hope of discovering one of these desks that has been treated gently by Old Father Time and is not too decrepit to be rejuvenated by the hands of a skillful cabinetmaker.

Our search may require months, and if one possesses a knowledge of old furniture and is at all exacting even years, but the treasure once in our possession is trebled in value according to the discouragement and disappointments of our protracted seeking.

One is considered fortunate to possess one of these heirlooms, but one desk or even two do not accommodate the family today, for practically it is necessary to provide a desk for every room in the house, excluding the dining room and drawing room, and this demand is often a tax on the young housewife, especially in a country summer home or bungalow, or even in a small city apartment, and these little substitute desks are designed to meet this need.



No. 1.

They can even be made by an amateur carpenter who possesses a little ingenuity and skill, and at a surprisingly small cost. Make them of wood to match the woodwork of your room, or should you prefer of the same wood as your furniture. If the woodwork of your room is white, make your desk of ordinary pine and paint to correspond with the room. Many of the stains so much in demand now are very effective, especially those in greens and browns.

The distance between the two shelves is from two and one-half to three inches, and this space will be found very convenient for account books, books of reference, and extra writing paper supplies. The spaces between the bookshelves above and below the desks are made wide enough to accommodate books of ordinary



No. 2.

size, otherwise they will look too heavy and out of proportion.

The writing tables are fastened to the wall by wooden supports or iron brackets, but this part of the work should be done by an experienced carpenter, as the desks must be securely fastened and braced to avoid any possibility of accident.

These little desks will be found not only attractive, but practical and most convenient, and any housekeeper, no matter how limited her allowance, can have several of them in her home at a very slight cost.

Desk No. 1 is designed for the library or living-room, as it is somewhat larger than the other desks and better suited to family use. This desk is 33 inches long, 27 inches high and 20 inches wide. The shelf above the desk is 10 inches high and 6 inches wide. The middle shelf below is 2½ inches wide; the side shelves 8 inches long, 9 inches wide and 6 deep.

No. 2 is a bedroom desk, and can be placed in any light and convenient corner; from 32 to 34 inches is a good length for this desk, the upper shelves spaced to suit one's fancy.

No. 3 can be used for one of the guest rooms, and is somewhat smaller than the others—27 inches long and 19 inches wide. The shelves 26 inches high. The shelf for books not over 6 inches wide. The height given is from the bottom shelf of desk to the top of the ball at back.

This little desk is a very pretty addition to any guest room and an unfailing source of admiration and appreciation.



No. 3.

Small Problems in Furnishing and Refurnishing

By MARGARET GREENLEAF

IN the heart of every good woman is strongly implanted the love of home, and according to her light and opportunity she will endeavor to embody within this, to her, "place of places" her feeling for the beautiful.

Where everything is to be newly purchased for the house, the wall covering or color should have her first attention. This decision must be influenced by the architectural detail, and the finish of the wood trim, and in color the walls must show the tones best suited to the exposure and lighting of the room. This important point settled, and armed with a length of the paper she has decided upon, she may proceed to find her floor coverings. If her walls will show more than two tones, and a pronounced pattern, the rugs or carpet should be quiet and unobtrusive and reproduce in a deeper shade the dominant color of the wall. After this the draperies may be chosen, and then, in turn, the various pieces of furniture; these should be assembled and tried together if they are not bought en suite. The small things of the room—table-covers, the piano scarf, and the simple decorative bits she may permit herself in ornaments, should be placed after the actual furnishing of the room is done.

In thus working out the decorative scheme for an entire house there is no smallest detail of finish or furnishing which can be left to chance. From the balanced placing of rugs and the adjusting of the various pieces of furniture there must be no departure from the painstaking care which brings such rich returns for its expenditure. It should be remembered that it is easy to overdo, and much restraint must be exercised, for a multiplicity of small things in a room renders it confused and unpleasant. Many otherwise attractive rooms lose all of their charm by the introduction of some unnecessary pieces of furniture, too many pictures, or too pronounced figure in side walls and rugs.

All rooms opening together should be considered relatively, and certain color effects repeated in each. For instance, it is a good, though not an imperative, rule to carry the same general treatment for the standing woodwork into all rooms which throw together. If English oak stain is used for the hall, lighter or deeper tones of the same color look well in the adjoining library and living room.

If ivory white enamel is the finish employed, it may appear in combination with mahogany stain for doors and hand rail of banister; also the mahogany can be appropriately used for the entire standing woodwork of any one of the rooms, as the precedent for this treatment is established by some of the best Colonial architecture. To tint all ceilings of adjoining rooms in the same color, and stain and finish the floors alike adds to the apparent size of the room and gives a harmonious and restful effect, which is so difficult to secure otherwise.

Where the rooms show Colonial feeling, and the white enamel and mahogany stain are used in combination, the wall



THE DINING-ROOM IS MADE ESPECIALLY ATTRACTIVE BY THE DECORATIVE FRIEZE OF PAPER ABOVE THE WHITE PANELED WAINSCOT. THE DOOR CURTAINS OF DULL YELLOW VELOUR REPEAT THE TAWNY SHADE OF THE RUG.

covering of the central hall may be in two tones of oyster white, the walls of the living room deepening to a tannish-gray in broken conventional figures on an ivory ground.

The dining room may depart somewhat from the strictly period idea and show a decorative frieze of paper above the white paneled wainscot. If this room is of northeastern exposure it should be treated in a way to bring warmth and color into it. The ceiling between the beams should be tinted with a soft yellow tone, and the frieze showing shadowy trees against an almost orange sky is especially beautiful with the fine old ivory tone of the enamel woodwork, and provides a perfect setting for the choice pieces of Colonial mahogany furniture used in the room. The door curtains of dull yellow velour repeat the tawny shade of the rug, in which appear also blue, olive, green, and dim old rose. The bricks about the fireplace should be more brown than red, and laid in yellow mortar. The quaint blue and white china set along the plate-rail would contrast agreeably with the rich yellows of the frieze.

The greatest problems which confront the amateur house decorator arise in the remodeling or redecorating of the old house. Where there is but little money to spend and many difficulties in the way of furniture and draperies to be reconciled, the ambitious housewife often feels overwhelmed and discouraged. However she should bear in mind there is always some road to be found toward improvement. She should first take careful stock of the various fittings of the room, arranging together such pieces of furniture as seem relative. For instance, if the living room shows the not unusual mixture of golden oak, mahogany, old-fashioned walnut, and some overstuffed pieces, the three last mentioned should be assembled together, removing the golden oak. If the only reading table is of this wood a cover which will extend down about eighteen inches will serve to disguise it. If the material used on the overstuffed furniture is of passable color and design it should stand, as the recovering of such pieces is costly. If this cannot be used, slip covers made from domestic linen taffeta, which comes in various attractive colors of good tones, can be here used. If the wall paper, for instance, is to be retained and shows dull old blue in its figure, a similar shade of this color should be selected for the furniture covering. The table cover should be made from upholsterers' velveteen in the same tone and trimmed about with dull gold galloon. The domestic linen taffeta will be found to make excellent over-draperies at the windows (we are supposing the wall covering shows more than two tones). Ecru net curtains could hang next the glass, and the ceiling could be given a wash of the same tint. Even though the carpet is of pronounced design and figure, the introduction of so much plain color will go far toward making the room attractive and interesting. If it is possible to use a carpet of small figure or showing two tones this should be done. Also, there should be a careful weeding out of the accumulated bric-a-brac which such rooms usually hold, selecting only such pieces as are decorative and of practical value.

In refitting bed rooms many odd pieces of furniture can be successfully used together, provided the lines of such pieces are not antagonistic, even though the wood may be different, for under the mask of smooth ivory enamel, oak, birch and other woods appear the same. When the pieces which look best together are selected, the varnish should be removed; this can be done by wiping the surface with wood alcohol, as in painting furniture it is not necessary to cleanse it from

the stain before applying the paint. This application can be successfully made by the amateur if time is given and care taken to follow to the letter the directions which come with all good qualities of mixed paint. Three coats of white lead should be applied successively, allowing each coat to dry thoroughly, then two coats of enamel, selecting enamel for this use which dries with a semi-gloss finish; this will not require rubbing.

The question of the bedstead is easily and cheaply solved by the iron ones of simple lines, which can be purchased everywhere. Most of these when found in the shops are painted a ghastly blue-white, which is most unattractive, therefore, if such a bed is used, it should be given a coat of the ivory enamel, which will bring it into harmony with the other furniture. Better still, have one of the wood bedsteads, with simple, slatted head and foot pieces, that can now be bought in the unfinished wood and enameled by the home decorator to suit herself.

To bring the decoration of a room into accord with the characteristics of the house,—to have them, in a word, suited to the surrounding as well as the needs of the occupants,—is of first importance. Harmony of color, or pleasing contrast comes under this head, next the entire elimination of all articles of ornament or furniture which are unnnecessary from an utilitarian or decorative viewpoint.

Old Houses Remodeled

By WILLIAM W. PURDY

PERHAPS some of our readers contemplate doing something in the way of building either by tearing off or adding to the "Old Homestead." It is for this reason that this article has been written.

Of late years since the so-called "cement age" or the cement house has come into vogue, a great deal of this work is being done.

One often hears the expression "Well, after I have put $100 or $500 as the case may be on repairing I still have the same old house. It is true, but at the same time how few of just these such people stop to consider how much this small sum expended is going to increase the chances for selling of such a place or keep it from going to "rack or ruin." The home like everything else in order to preserve and prolong its life must be kept in good repair.

The writer has known of several instances where say $250 has been expended on a coat of paint and the building of a new front porch would increase the value of the property and often times result in the sale of same and bring from $500 to $1,000 more. What then is a better investment?

Some people instead of painting prefer to cover the siding with expanded metal lath.

In the illustration Fig. I shows just such a typical old colonial house, built on substantial lines but with the exterior much in need of paint and repair, where this has been done and a couple of coats of cement plaster applied.

The first coat being given a chance to get perfectly dry before the second one is applied. In some cases this is thrown on with a stiff brush and left as rough cast work, while again it is applied with the trowel and left perfectly smooth as is shown here.

In Fig. II shows this same colonial



Frequently you find an old claphoard house built on substantial lines but with the exterior much in need of paint and repair.

house after this cement coating has been applied. Note what a solid, permanent appearance insuring a desirable weather surface for generations to come.

This is done at an expense of about 90 cents per square yard.

Then too, the building of a new porch or the adding of a porch makes a vast change in the exterior appearance.

In Fig. III we have the architect's conception of a colonial porch well adapted to this particular design showing how



Concrete applied to the exterior gives it a solid, permanent appearance and insures a desirable weather surface for generations to come.

this same old house would appear after $150 had been expended on such a porch thus adding to its beauty and the old vestibule torn away.

The construction of a sleeping porch is another feature just taken into consideration in the building of the new home.

Why not have this on the old as well as the new.

Then too, in some of our different types of old houses in our larger cities that are growing very rapidly, a great many of these old homes after the expenditure of several hundred dollars, are being made into very desirable duplexes to meet the demands of the renter.

But this problem of remodeling need not only be confined to the exterior, for in many cases a few dollars well expended on the interior will add greatly to one's comfort.

The "old homes" as we look back and think of them today were rather queer specimens beside our modern square type colonial design, long, usually rather narrow, irregular in shape containing any number of so-called small cut-up rooms, such as reception hall, parlor, sitting room, dining room, library, pantry and kitchen on the first floor and some five or six bedrooms and bath on the second. Today what do we have, one large living room across the entire front or side, large dining room, pantry and kitchen with possibly a den on the first floor.

Rooms few in number but large and open. Why not then preserve some of these old homes, the large majority of them being better constructed of better materials and finish than we are using today by simply making a few minor improvements on the interior by cutting a wide cased or columned opening thus giving a more open homelike appearance, making a large living room and dining room and constructing a new front porch or adding a sleeping porch and having not only the attached relationship of the old home thirty years ago, but the comforts of the day also at a very small expense.



The face of the house can be improved by reinforced concrete pillars, developing the colonial feeling and adding to its beauty.

Construction Details of the Home

The Bathroom

Size, Location of Fixtures, Floor and Walls.

THE bath room should suggest sanitation the moment one sees it. The fixtures, floor and walls should be in harmony as to material and color scheme, that everything may look bright, clean and pleasing.

Size is a factor which enters largely into convenience, but is not essential to the above requirements. Plan A shows an arrangement about as small as it could possibly be, yet there is the required amount of space for the fixtures. The principal objection is the necessity of reaching over the bath tub to operate the window which is a single sash to swing in, placed just above the wainscot cap.

Plan B is not open to this objection, as the fixtures are arranged at either side, leaving a free passage to the window.

Plan C is only 2 inches larger than Plan A, yet the arrangement of fixtures and windows is most admirable for its size. A small window is placed at each side of the wash bowl above the wainscot lighting up both sides of the face when shaving and producing a light reflection in the mirror above the bowl in the door of the medicine cupboard.

Plan D shows the long bath room with the fixtures arranged along one side, with the wash bowl close to the window for light. This shape of room may result from the demands of more important rooms adjacent where the floor space is limited. Many prefer this type to any other.

Plan E shows a complete bath room of good size, but containing no more than the necessary space to contain the fixtures. The bath tub is shown here in front of the window, but the fixtures at either end make it possible to reach the sash with less difficulty than directly over the tub. The sitz bath is of great value in applying heat to the vital organs, concentrating the effect of increased circulation and correcting abdominal ailments. A well appointed bath room should contain one.

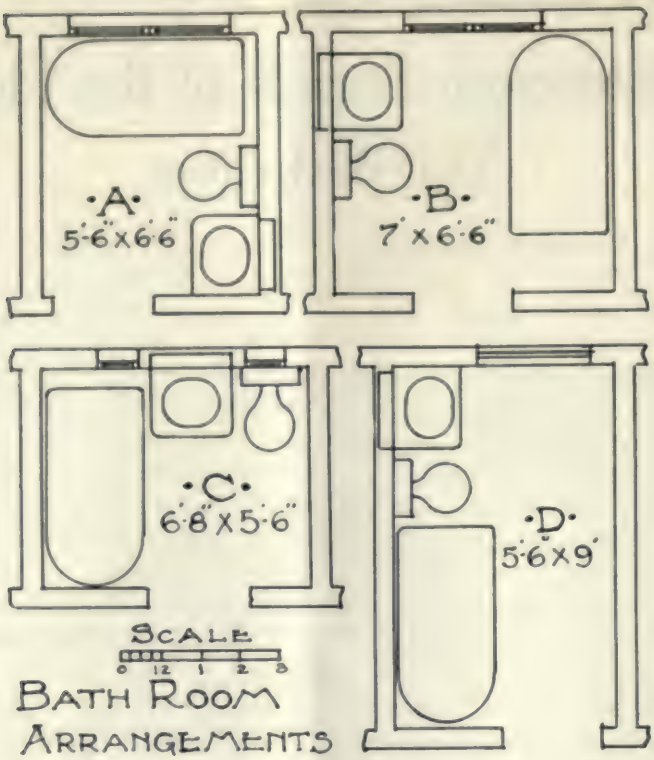
A pedestal bowl is indicated upon the plan, the most ornamental design of this fixture.

The shower bath is located in the corner and is provided with the various sprays at different levels for effects on the body and is enclosed with a protecting curtain.

The foot bath next to the shower bath is a convenience which may not be classed altogether as a luxury in a well appointed bath room.

The closet is isolated from the other fixtures, but may be approached through the door from the bath room or from the hall. In this way it is handy to the bath room without being actually in it and is not put out of commission as far as the rest of the house is concerned by the presence of anyone in the bath room.

Plan G shows an arrangement which is found in some small homes, but which is open to some objection. It has two doors, one to the hall and the other to the adjoining bed room. The arrangement of fixtures is satisfactory, but the possibility of intrusion upon privacy is not. Where it is possible it is always well to arrange clothes closets or wardrobes



BATH ROOM ARRANGEMENTS

about the bath room to deaden the sound to the adjacent chambers. In this arrangement the occupants of the bed room would be disturbed by the presence of others in the bath room, who had waited till they themselves had retired.

These plans have been made as small as possible because of the limited amount of available space, in the average moderate cost house.

The addition of a foot or two would make them much more roomy, leaving the arrangement undisturbed.

Medicine Cupboard.

The only fixture to properly be described at this time is the medicine cupboard, because it is usually built into the wall. Studs are set 16 inches on centers, thus leaving a space about 14 inches between them, into which the cupboard is set. Its size is therefore about 14 inches wide, 18 inches high and 4 inches deep, containing shelves to accommodate medicine bottles, etc.

The opening is closed up like the general house finish, except that the casings should not be over 3 inches wide. The door is set flush with the face of the casings and enclose a beveled plate mirror. The best location for the medicine cupboard is directly over the wash bowl with a light on either side.

The Bath Room Floor.

The floor may be of tile, composition flooring sometimes known as stone wood, or actual wood. Of these, tile is a good floor, but shows dirt, the composition can be made in any color, and therefore not as likely to look dirty and the wood can be of a kind that does not appear dirty unless it is badly neglected. Wood floors absorb moisture and are therefore unsanitary and require refinishing, an item that is constant.

Linoleum is a satisfactory floor covering in many respects, but hardly gives the appearance of quality necessary in a nice bath room. Dirt collects beneath and must be removed occasionally to keep the bath room in a sanitary condition.

A non absorbent floor of a color that does not show dirt readily would seem to be best, but may interfere seriously with a bright, pleasant color scheme for the room.

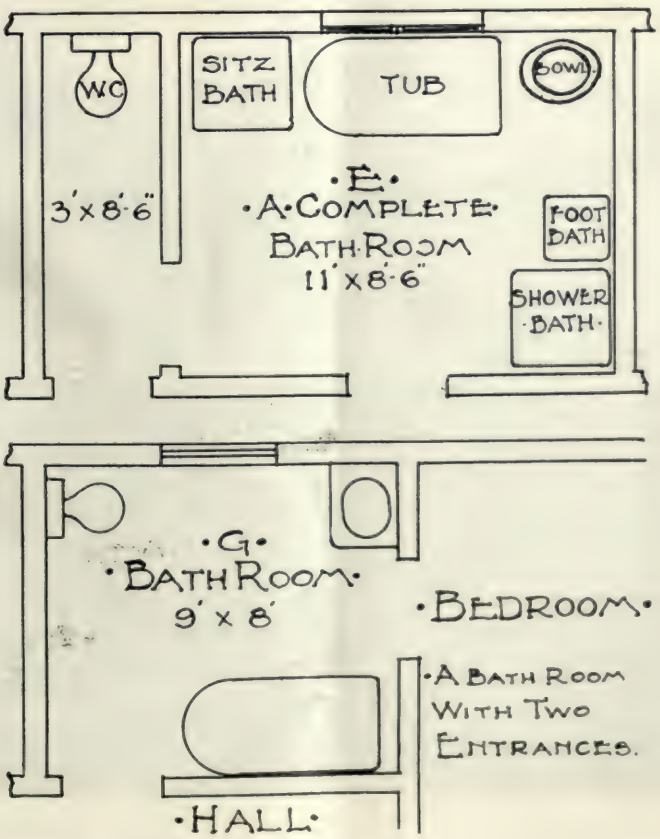
If pipes are likely to need attention at any particular point in a tile or composition floor, it is well to put in a metal screw plate at once rather than to repair the floor after the plumber has chiseled through in several places to find the right one.

The Bath Room Walls.

A tile wainscot 4 feet high is very appropriate with a tile floor and should be finished with a neat tile cap.

A very nice effect may be obtained by the use of the tile marked oil cloths which are on the market, provided they are carefully hung and provided with a wood cap.

The plaster wainscot may be marked off to imitate tile and given a coat of enamel, in an inexpensive house both in bath room and kitchen. The wall above the wainscot cap should be hard finish for painting. A 3-inch "Crown mould" placed at the ceiling and white enameled like the other finish will add much to the general appearance.



A Brick and Plaster House

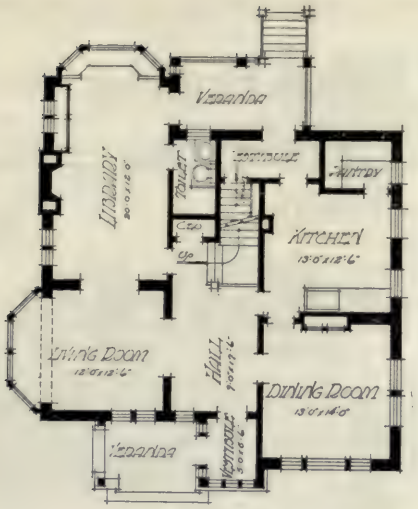
THERE is no end seemingly to the splendid combinations which architects and builders are devising for human habitation. Exterior and interior alike are formed to meet the greatest whim, to accommodate the greatest needs and to fulfill the ever-present desire for comfort and convenience, and at all times to please the eye.

Sveral important features of the house illustrated on this page command attention. The combination of brick and cement plaster is not uncommon; it is the way in which the combination is made that makes it handsome and serviceable as well. The first story of this house is of frame construction with a veneering of brick that gives the structure an appearance of permanence and substantiability, and this appearance is not artificial, for the house is set upon a 12-inch wall which encompasses the spacious basement.

The second story is of frame construction covered with metal lath upon which the cement plaster was applied. The wood work on the porch and the finish at the eaves of the roof is of cypress stained a dark brown. The window frames and the sashes are painted white, and the roof is covered with unfading green slate.



—Mildner & Eisen, Architects



FIRST FLOOR.

The interior of the first story is finished in quartered sawed white oak, stained a light brown. The kitchen is finished in southern pine. The second story is finished in whitewood, for a white enamel finish, and some portions in southern pine.

All of the floors in the first story, except the kitchen, are laid with white quartered sawed oak flooring, the kitchen in clear white maple; the bath room and toilet rooms have tile floors. The mantel in the library is a plain brick mantel. The entire building is heated with hot-water heat.

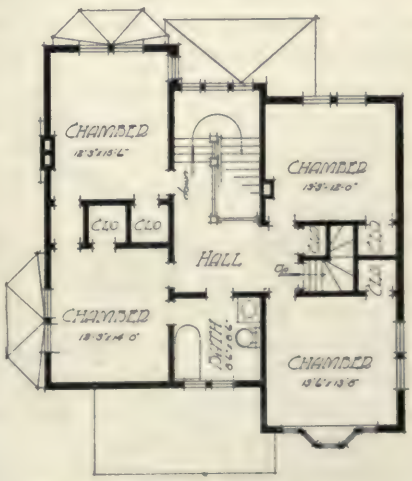
The arrangement of the rooms on the first floor is at first glance a bit uncommon, the dining room being entered from the hall and facing the thoroughfare. The arrangement, however, in this case is a very desirable one, architects having given prime consideration to the location, which is an essential to, but frequently overlooked, proper construction.

The living room and the library look out over a pretty valley, and it is eminently proper that these two rooms, which are the most frequented, should afford the best view and give the best light. Both the living room and the library have well lighted bays.

The location of the dining room is a pleasant one. Facing to the east, as it does, it gets the morning sun that always cheers the breakfast room when it reaches it. Both the kitchen and dining room can be enclosed from the living room by sliding doors.

Cost Itemized.

Carpenter work	$3,100.00
Mason Work	1,600.00
Electric Fixtures	198.00
Plumbing and Heating	1,159.00
Painting and Glazing	403.00
Plastering	600.00
Hardware	114.00
Cut Stone	80.00
Electric Wiring	95.00
Granolithic Floor	102.00
Roofing	209.00
	$7,660.00



SECOND FLOOR.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 313 W. C. NORTHRUP, Winston-Salem, N. C.
B 314 A. M. WORTHINGTON, Kalamazoo, Mich.
B 315 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 316 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 317 JOHN HENRY NEWSON, Cleveland, Ohio.
B 318 GEO. M. KAUFFMAN, Cleveland, Ohio.
B 319 KEITH'S ARCHITECTURAL SERVICE, M'p'l's.
B 320 F. D. CHASE, Chicago, Ill.

Design B 313.

THE opening study for February is a cottage design in brick and shingles by W. C. Northrup, architect:

A simple yet very effective design and if built for a lake cottage where plenty of ground was available to give it the proper setting it would make a very attractive home.

The living-room might be termed ideal with plenty of light from three sides and open fireplace. Note the bay window with seat, also the other fireplace in dining room.

A nice den another feature not often found in a house of this size and within this price, with space for a closet or toilet off of same. On the second floor are three large chambers, two of which have a fireplace, a sewing room and bath, all with ample closet space with a linen closet off hall.

The finish is softwood to be stained with hardwood floors throughout.

The house being designed for the south no basement has been provided for, it being intended to heat with fireplaces, but one could easily be provided for and heating plant installed at a cost of a few hundred dollars extra. Size, 37 ft. 6 in. by 38 ft. 6 in. over all. Estimated cost to build $3,500.

Design B 314.

In this design by H. M. Worthington, architect, we have a rather "dutchy appearing type" of the gambrel roof treatment. The main feature is the large living room somewhat divided by a columned opening so that in entering from the side as one does, a portion serves as a reception hall. The combination stairs lead to the second floor from this reception room. There is a grade entrance leading to the cellar or up four steps to a little entry off kitchen. With this entry the rear porch and entry is done away with.

There is no pantry but with kitchen cupboards each side of the sink help to make this a very compact little plan.

The unique little bay in dining room is a very attractive feature from the interior as well as the exterior.

The three chambers and bath on the second floor are all that is needed to make this little cottage complete for a small family.

Birch or maple floors are intended throughout with hardwood in the main rooms downstairs, balance in pine to paint.

The basement contains a hot air furnace and laundry.

The size exclusive of porch is 22x26 feet. Estimated cost to build about $3,000 complete.

Design B 315.

The use of the English half timber construction combined with cement dash work is not new in this country, but is



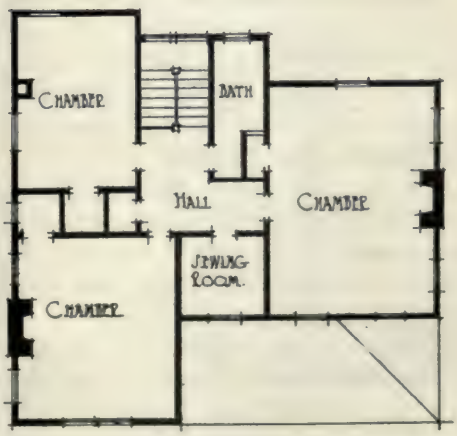
—W. C. Northrup, Architect.

Built for a Lakeside Cottage

DESIGN B 313



FIRST FLOOR PLAN



SECOND FLOOR PLAN

growing in use very rapidly in some localities.

In this connection the gambrel roof is very appropriate where low cottage effect is desired and for rural homes, lake side or sea side resorts is especially desirable.

The design by Charles S. Sedgwick, architect, is on the rambling order, with the entrance receding and back in the angle formed by the dining room wing.

The living room with the wide piazza across the front makes a very attractive room and is well lighted on three sides.

The dining room is of ample size and well connected with kitchen through the pantry. There is a bedroom on the first floor and a bathroom accessible from both bed room and kitchen.

On the second floor are three good bed rooms and ample closets. The rooms being full height and well lighted. The first floor is mission oak and the second floor is natural yellow pine or fir.

Estimated to cost $4,200.

Design B 316.

A simple gambrel roof cottage designed by A. C. Clausen, architect.

The attractive feature of this design is the screened-in dining porch, the rooms are all good sized.

The living room has a large corner fireplace. This necessitates only the one chimney for fireplace and kitchen range.

There is a built-in sideboard with seats on each side in the end of dining room.

A well fitted up pantry together with rear entry and place for refrigerator go to make the plan complete.

Three chambers and bath comprise the second floor arrangement together with balcony over dining porch.

There is a basement under the entire house with hot air furnace.

The main rooms downstairs being finished in oak or birch and pine to paint for the second floor with hardwood floors throughout.

Size is 24x32 feet exclusive of porches. It is estimated that this house can be built complete with heating and plumbing as described for $3,600.

Design B 317.

With its exterior wall of lap siding and stained a dark brown, the trim painted white, moss green roof and cream colored brick chimney makes a very harmonious color scheme for this charming little five-room bungalow.

The plan is very complete with open fireplace in living room, built-in buffet in dining room, pantry with cupboard, and work table, linen closet in the hall. A bath and one bedroom on the first floor and one finished off on the second floor with space enough for another provided a front or rear dormer is added.

Hardwood floors throughout with hardwood finish in main room, balance in pine to paint. Basement under entire house with hot air furnace.

The house was designed by John Henry Newson, architect, and is 27x34 feet and is estimated to cost $2,100 exclusive of heating and plumbing.

Design B 318.

Another picturesque cement plaster home designed by George M. Kauffman, architect.

The large cement chimney, the corner veranda with little pergola entrance are among the attractive exterior features.

In this plan we have a small breakfast room off the kitchen.

The second story overhanging the rear porch which is accessible to dining room and kitchen can be used as a dining porch.

The second floor has four good sized bedrooms, sewing room, bath with an extra toilet and lavatory. There is a basement under the entire house with hot water heating plant, also a fair sized attic

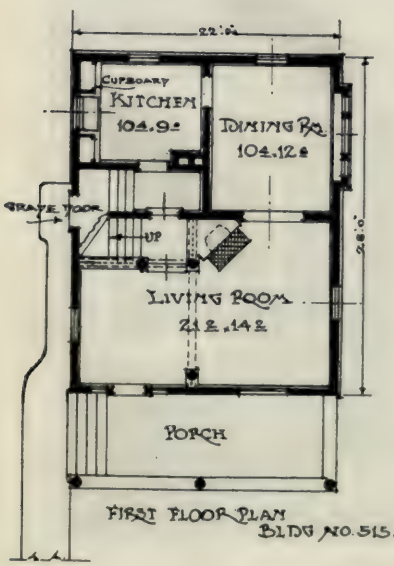
The main rooms are finished in hardwood with pine to paint for second story with hardwood floors throughout.



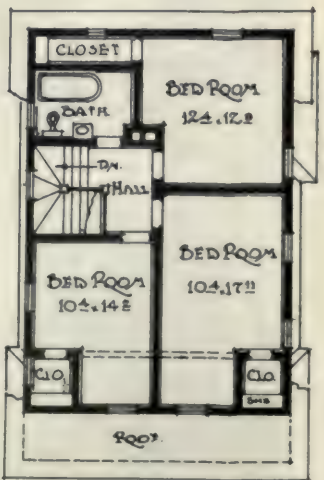
—A. M. Worthington, Architect.

A Shingled Gambrel Roof Cottage

DESIGN B 314



FIRST FLOOR PLAN
BLDG NO. 515.



SECOND FLOOR PLAN
BLDG NO. 515

Size 40 ft. 9 in. by 24 ft. 9 in.

Estimated cost as described, about $6,500.

Design B 319.

A simple inexpensive little cottage in stucco with shingles in the side gables. The living room occupies the entire front with window ledge at each end and open fireplace.

The stair is a combination stair from living room and kitchen with stair to basement underneath.

On the second floor are three chambers and bathroom.

It has hardwood floors throughout with hardwood finish in the main rooms downstairs, the balance in pine to paint.

The basement extends under the entire house and contains a small furnace.

The house is 30x30 feet, the lowest wall height being 5 ft. 4 in.

Estimated cost to build including heating and plumbing, $3,500.

Design B 320.

In this design we have somewhat of a pretentious two-family house, well adapted to a corner lot as shown by the illustration.

The main features of this design are that each family has their own separate entrance with covered front and rear porches.

The exterior is a dark brick with white glazed terra cotta window and door trimmings. Tile floor on the porches and slate roof.

The living room, reception hall, dining room and library all being connected by a cased opening, gives rather an open homelike appearance.

The rooms are all good sized, the large bedroom having a dressing room and bath adjoining.

The kitchen, pantry and servants' quarters with servants bath are very complete.

There is hardwood floors throughout the finish of the main rooms is mahogany or oak. There is full basement, each family having their own separate hot water heating systems, laundry, fuel and dry rooms.

The size exclusive of porches is 33 ft. by 76 ft. 4 in.

This residence was designed by F. D. Chase, architect, and is estimated that it can be built as described for $20,000.



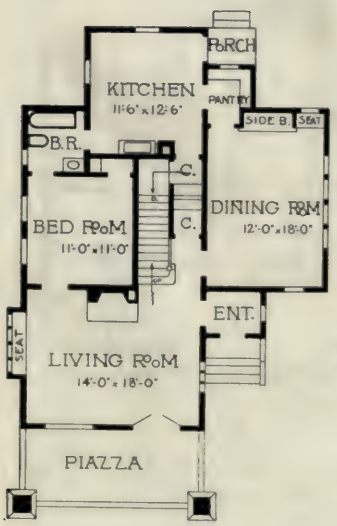
HIGH PANELED WALL FOR DINING ROOM.

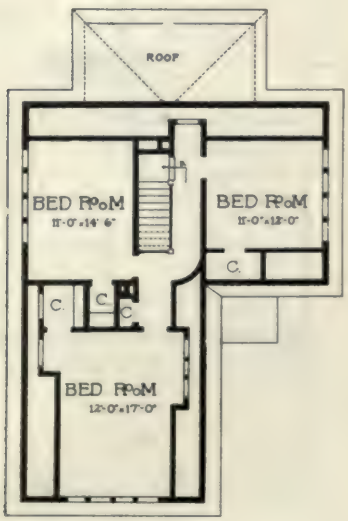


—Chas. S. Sedgwick, Architect.

English Half-Timbered Cottage

DESIGN B 315



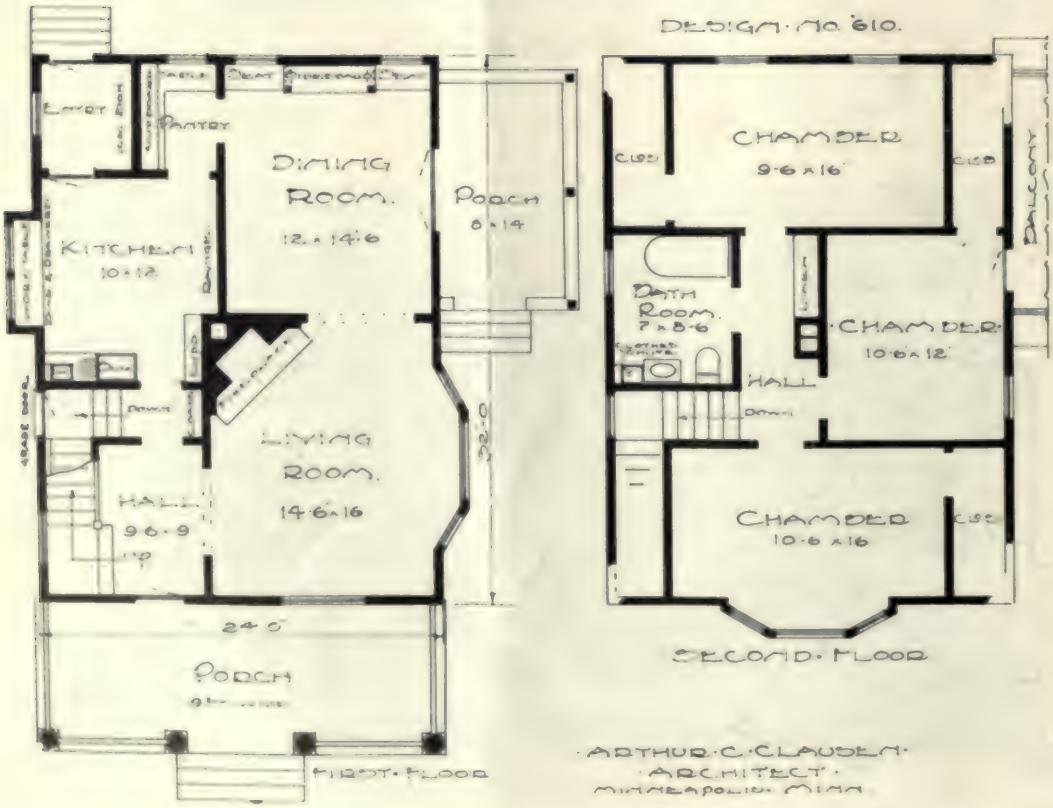




—Arthur C. Clausen, Architect.

A Simple Gambrel Roof Cottage

DESIGN B 316

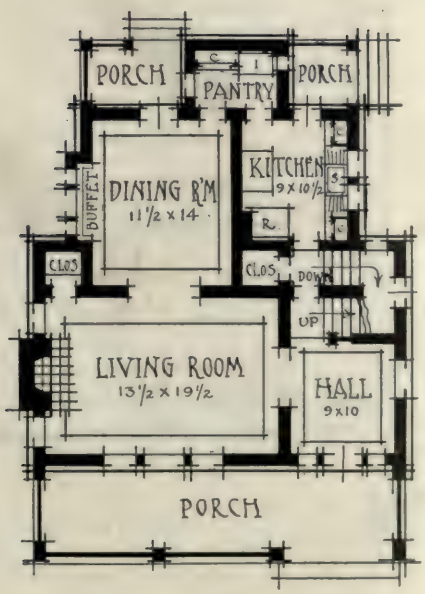


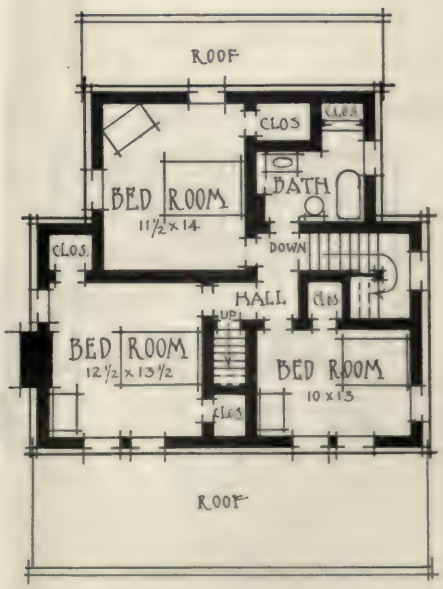


—John Henry Newson, Architect.

A Seven-Room Cottage

DESIGN B 317



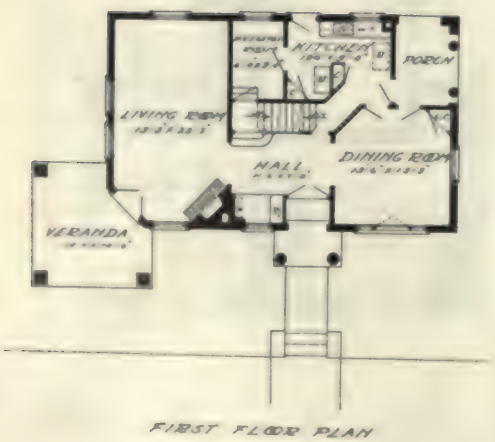




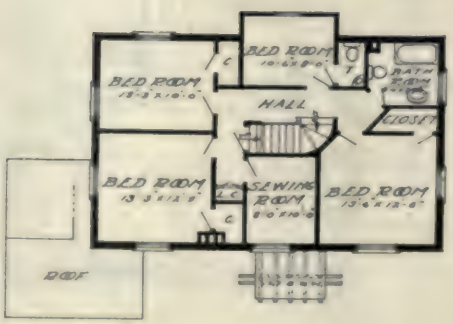
—Geo. M. Kauffman, Architect.

An Attractive Design in Cement Plaster

DESIGN B 318



FIRST FLOOR PLAN

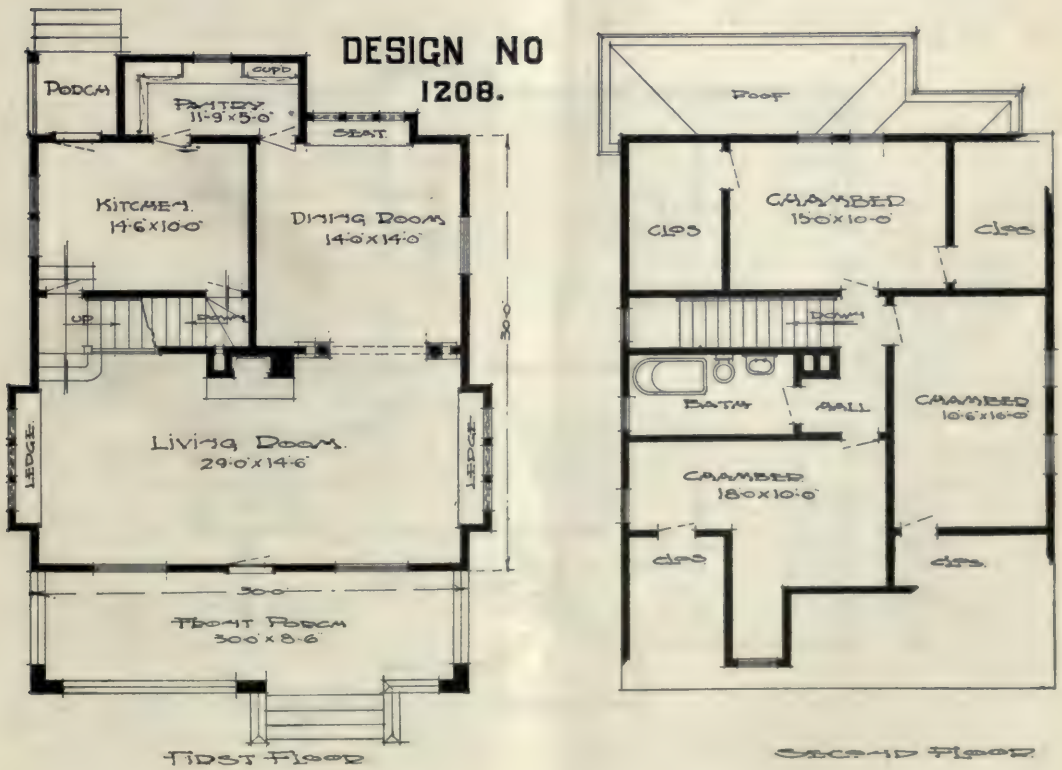


SECOND FLOOR PLAN



A Little Stucco Cottage

DESIGN B 319





—F. D Chase, Architect

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DESIGN B 320



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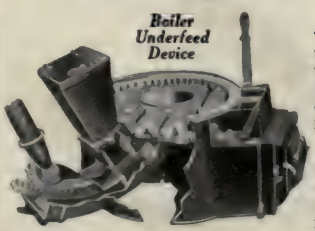
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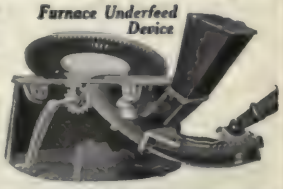
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Conducted by ELEANOR ALLISON CUMMINS, Decorator, Brooklyn, N. Y.

The Recessed Window.

THERE is a charming window, which we associate with English rural architecture, which ought to be more popular here than it is. I mean the long low window taking up the best part of the side of a room, with an embrasure a couple of feet long, drawers below it and closets on either side of it. It is a feature of the dining rooms of many of the Craftsman houses, where it is made a part of the sideboard.

But it is specially charming for a bed room. Its structure lends itself to all sorts of charming arrangements in the way of curtains, and the quainter the cretonne used the more delightful the effect.

If the sill is the right height, such a window can be used for a dressing table, following the English fashion of having a mirror with its back to the light. The drawers should be omitted from about three feet to the center of the space below the window, so as to leave room to sit before the mirror.

The mirror itself should be swung between standards, and its back should be covered with cretonne like that of the curtains, as it is seen more or less from outside. Sometimes the whole sill of the window is covered with cretonne, and the dressing things are kept in front of the mirror. An improvement on this is to have the wide sill painted white like the rest of the woodwork, having a sufficient space in the center at a slightly lower level. This space of lower level is filled in with cretonne and covered with a sheet of glass, held in place with a narrow moulding. With a rather high chair with its back cut down so that it is not more than nine inches high, you have a charming dressing table at slight expense. One thing in favor of arrangements of this sort is that in small rooms they diminish the amount of furniture which must be bought.

Supplying a Foil.

The average room with cretonne furnishings and white woodwork is colorless, or if not colorless the color is so distributed that it is not impressive. It needs something to bring it into line. Nor is this supplied by mahogany furniture, which too often only emphasizes the discordance. In very many cases the floor covering is at fault. Rag rugs in delicate colors are not the best choice for such rooms. Rather they need rugs of positive, if low tone. The room with masses of rose patterned cretonne is greatly improved by a rug of plain, or nearly so, gray blue. Flowered effects in lilacs or old pinks are at their best when they are contrasted with green, or in rare cases with grey, while what we call the nasturtium colors are helped out by golden brown. These latter, by the way, are much more agreeable to live with if they are contrasted with something else than clear white.

Recent Wall Papers.

While on the subject of floral effects, it is in order to mention an unusually good floral paper suitable for a large bed room with mahogany furniture. It has a wide stripe, almost the width of the roll, with an effective design of tropical birds, flowers and foliage on a pure white ground. These wide stripes are separated from each other by a stripe of classical ornament, the conventional filletted leafy branches, in low toned green. The character of the design demands rather large and high wall spaces, but it





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is most effective. A cretonne can be had exactly matching the floral design of the stripe, which might be successfully used as a covering for a single large chair or couch, but a plain material, either white or green, is better for use with these elaborately patterned papers.

There is a good variety of small patterned, low-toned green papers, either in two shades of the color or in two surfaces of the same shade. Papers of this sort are admirable for sunny living rooms with many pictures, as they are excellent and unobtrusive backgrounds, and they will admit of the association of almost any color.

The light colored tapestry papers, in either grey or green tones are excellent for formal parlors, or for bed rooms in which it is desired to use much bright colored cretonne. For the latter use they are preferable to the largely used two-toned papers in white, cream, or pearl gray, as they are much less likely to show soil, and the design is so shadowy that it does not conflict in any way with the stronger pattern of the cretonne.

Black Wall Papers Again.

The wall papers with black grounds and highly colored floral patterns continue to be shown, and will probably have a limited vogue, as they are exquisitely beautiful, but they certainly do not appeal to conservative tastes. The writer has seen a small music room in which one of them was used. The coved ceiling was a very dull gold. The woodwork was also dull gold. The wall paper had bunches of deep pink flowers on the black ground. Lamps with deep pink silk shades stood on either end of the ebonized piano, the rug was a Kashmir, its predominant tone a dark rose, the furniture teak wood, with loose cushions of dark old rose Liberty velvet, while the curtains were of a figured mercerized material in rose and black. There were no picture but some bits of bronze. It was really very beautiful, particularly by artificial light, but very unusual. Abroad, where the fashion has taken largely, they are using ebonized woodwork and black velvet hangings. With the black ground the color tones of the design are necessarily strong, and whatever is used with these papers must have a certain depth of tone.

An Over-Mantel Arrangement.

A Fifth Avenue decorator shows an effective over-mantel arrangement for a drawing room furnished and decorated in the formal French style. Woodwork and furniture frames are old ivory. The wall paper is a two-toned stripe in tan, with a silk surface. The curtains are old blue brocade, the coverings of the chairs a tapestry with a tan ground, the rug old blue. The space from the ceiling to the mantel shelf is covered with old blue brocade, slightly draped here and there. Against this background hangs the only picture in the room, a portrait in pastel in an oval gilt frame. It is flanked on either side by gilt sconces, each holding two candles, and on the shelf are a gilt clock and two vases of the same material.

The same idea might be effectively carried out in a simpler room, where it is desirable to give special prominence to some one picture.

The Decorative Value of Screens.

A screen has its uses, although they are less evident in a generation which sleeps out of doors and is not afraid of draughts, than they were once. Its uses today are more those of concealment than of protection. But nothing can rob the screen of its decorative value. It is a piece of furniture which has the valuable quality of distinction, and it imparts something of that quality to an otherwise commonplace room. It is invaluable for cutting off a corner, for filling in an awkwardly wide door, for concealing the back of an upright piano, or for breaking the approach to a reception hall. A high screen is also useful as a background to a group of small articles of furniture which might look patchy without it. And it is almost indispensable in a bed room occupied by more than one person.

Screens to Match Furniture.

When a screen is to be used in a room with a distinct color scheme, it should either match the rest of the furniture, in frame and covering, or else carry out the general tone of the room. In a drawing room with upholstery in light colored and small patterned material, the screen



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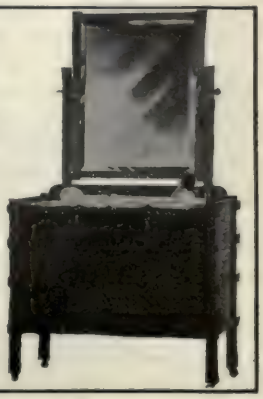
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should have its panels covered with the same fabric. Or the panels of the screen may be covered with a plain silk, reproducing some tone of the figured fabric. In the ordinary room of this type, a soft old rose, or a grey green will be harmonious. Such a screen is often used as a background for a collection of miniatures, or small framed prints may be hung against it. A good covering is a raw silk, of Japanese make, or a French toile with an armure weave. There is also a taffeta silk in a soft weave, sold by upholsterers for curtain linings, which is agreeable in texture and good in color, and admirable as a covering for a four-fold screen, with an edging of dull gold braid.

Closet and Screen Combined.

Where space is limited, a substantial, four-fold screen, solidly made, can be utilized as an annex to the closet of a bed room. The frame should be made by a carpenter, of substantial material, and it should be covered on both sides with cretonne of stout quality. Pockets for shoes and stockings are fastened to the lower part of each panel, on the inner side, and a row of small hooks, for bath gowns, and night dresses set across the top. If the carpenter is instructed to fasten an additional strip of wood, from side to side, midway of each frame, a second row of hooks can be put on, and the hanging capacity increased. Naturally the screen can never be entirely closed, but that is not a serious objection, and when the need for its use as a closet is over, pockets and hooks can be removed.

Metamorphosing a Paper Screen.

The ordinary paper screen, sold very cheaply in Oriental shops, is not often a thing of beauty, nor does it "compose well" with most furnishings, but it can be made over. People who are clever with paste have sometimes covered such screens with a handsome wall paper, but the process is beyond most of us. It is, however, possible, by using very small brads, to cover the face of each fold with a strip of figured cotton, turning in the edges very neatly. For this purpose, nothing is better than Japanese cotton crepe, as it is firm in texture and can be had in most effective designs.

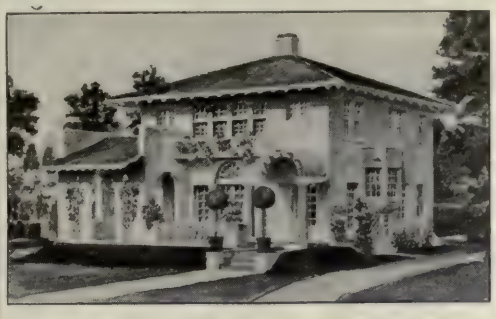
There is another sort of screen which has a wooden frame made in imitation of bamboo, or one of bamboo, and shirred silkoline panels. Even this has possibilities. With the silkoline removed and replaced by burlap or denim, in brown or green, tightly stretched over the wooden rods, it becomes a very presentable affair. The fixtures on which the panels swing will have to be removed before the change can be made, and the strips of denim must be hemmed at the sides, and very tightly stretched. A screen of this sort is sometimes used as a background for unmounted photographs and other pictures, which have a merely temporary interest.

One thing is greatly in favor of the Japanese screen, that it is four-fold, and that it is possible to get one of good height for a very moderate price. A four-fold screen, five foot six in height, costs $7.50, one of five feet, $5.50, four and a half feet, $4.50. The designs are either the familiar cherry blossom or landscapes with the inevitable Fujiyama in the background. While all of these screens are effective, those with white and yellow grounds appealed to the writer more than the others.

Beginning at $8.50 there is a wide range of screens whose panels are framed in polished cherry, either ebonized or in the natural tone of the wood, which is not unlike the natural birch, with which we are all famaliar. These frames have rounded upper corners, and they are filled in with satin of various colors painted in chrysanthemum or cherry blossom designs.

Screens of the same style embroidered exquisitely in either iris or chrysanthemums are $25, and from that figure range up to the hundreds. The cloth backs of these screens are painted in landscape. The familiar black and gold screens range from $4.50 to $80. A really handsome one, five foot six in height, can be had for $27.50.

An effective bit of furnishing is a low, four-fold fireplace screen, designed to conceal the empty grate in warm weather. These are covered with gold paper, of a peculiarly rich tone. Plain they cost $10, painted sketchily in black in a landscape design they are $11.



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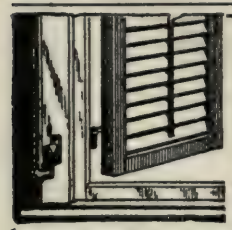
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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

O. G. B., Honolulu: "Again I am sending you a very rough floor plan, and I would like you to tell me how to finish my walls above the plate shelf. My room which is used as a dining room and living room together, is paneled to the plate shelf and stained a weathered oak color. The space above the shelf and between the ceiling beams are burlaped and painted a light yellow.

"The shelf being so high, it seems odd to put plates, steins, etc., on it.

"What would you suggest as a finishing for the wall above the shelf."

Ans. The plate shelf should have been run on a line with the tops of the doors. If you can have it set down there, the effect will be better.

If you do not like the pale yellows of the burlaps, paint it over again, a soft, pale ecru. Then at the top, stencil a decorative frieze in dull reds, dull greens, blues, etc., with some yellowish browns.

You could hang your steins underneath the plate shelf which would help out the effect of too great height.

J. M. Q.: "I am enclosing floor plan of my new two family house. Will you kindly make suggestions as to painting and papering the interior. The owner will occupy the second floor. The parlor furniture is mahogany with green upholstery, the rugs are Oriental design, cream color with some blue and old rose; there will be a mahogany mantel.

"The dining room furniture is golden oak; a Wilton rug, red, cream, and black, red predominating. There is a plate rail in this room.

"The bed room furniture is Circassian mahogany, brass bed, red rug, white lace curtains, etc."

Ans. There can be but little departure from the conventional style in the treatment of these small rooms, with the furnishings you mention. Plain and neutral tints should be used on the walls, especially of the apartment to be rented. The best choice for the second floor parlor is a pale ecru with ceiling a shade or two lighter. The same colors should run through into dining room. The dining room wall above plate rail to be plain ecru a little deeper shade, with an eight inch border in dull reds, greens, etc. Below the plate rail, one of the paper imitations of wood wainscoting could be used.

The front bed room should have a grey chambray wall with or without a narrow border of red beneath picture moulding. The den with green rug, mission furniture, could have grey-green burlaps on the wall with ceiling tinted a lighter shade.

We can only suggest tones of grey or greenish grey to be used on first floor in place of the ecru on second floor, if you desire a difference. The walls should be neutral.

Mrs. C. D. W.: "I would like suggestions for color schemes, etc., for new home built of cobblestone and cement—first floor plan. I have thought of green or a green-gray combination for the living room, and browns for dining room, but do not know what to use for the hall. Any suggestions you may make will be gladly received. Although a regular reader of your magazine I have not found just what I need in this case."

Ans. Your ideas of color to be used in the living and dining rooms are excellent. With a Craftsman trim, the happiest wall would be a silver grey, green grass cloth, for living room. If this cannot be afforded, there are paper imitations of grass cloth effects that are fairly

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satisfactory. Of course they lack the light and changing surface of the grass cloth. This should be plain with no top finish, but the picture moulding in such low rooms.

An ecru wall in dining room with narrow border at top of dull reds, greens and yellows, would be very good in a northwest room. Ceilings paler shade. One of the "iridescent" papers, $1.00 a roll, showing coppery reds, greens, yellowish browns all blended together, in the hall, would harmonize with the rooms and be handsome.

Mrs. N. H.: "Am enclosing floor plan of our new home. Main rooms finished in oak. We expect to furnish the dining room, sitting room and hall in oak furniture, but am undecided about the parlor, am a little partial to mahogany. Would you advise it with the oak woodwork. I had thought of a brass bed and birdseye maple dresser for the bed room. Would it be good taste to have a small square rug for the center of floor in parlor with small rugs laid in front of chairs and piano, or do you think a room size rug would be more appropriate, or not have the small center rug and have little rug in front of chairs and piano. The woodwork in kitchen will be painted stone color.

Ans. Replying to your recent inquiry would say, that if the woodwork in parlor has not already been placed, better change it to birch stained mahogany, if you wish to use mahogany furniture. Oak furniture is not suitable for a parlor, when there is a separate living room. If the woodwork is in place, you could stain the oak silver grey instead of brown and you could then use mahogany furniture with it. Sherwin-Williams silver grey stain is a beautiful finish.

By all means, have one large rug instead of several small ones. You cannot do with less than 9x12 in that room and it ought to be 10x13. An all over lace curtain net would be pretty for such a room. In the living room and dining room, use cream voile or scrim with narrow edge for finish.

The walls of the parlor could have an all over design in pale shades of terra cotta, sort of tapestry pattern. Just a moulding in ceiling angle for finish. The sitting room, a putty grey crepe paper; the dining room in green tones. The same ceiling, a light grey, should run through both these rooms. The hall could have a mahogany colored burlap, pale terra cotta ceiling. It is a pity to finish the bed room pine natural. It should be painted cream color. Then your birdseye maple would look very pretty with a blue chambray wall paper. Lead colored woodwork makes a very dismal kitchen. Better paint it light brown with buff walls.

H. E. M.: "I am sending under separate cover, floor plan of my new home. What color scheme would you suggest for the sand finished walls, which we wish tinted? Inside woodwork to be golden oak. My parlor rug is green, brown and red, green predominates. Living room rug in tan and brown, also hall runner. Buff brick fireplace in living room. I have a heavy new rag rug in dark colors, mostly brown. Could it be used in small chamber on first floor? Would neat scrim curtains, sash length, be in good taste for parlor and living room? How shall I treat middle window in parlor which is higher from floor than other two and has small diamond panes? Also the window in vestibule and bath, which are also diamond latticed?"

Ans. A pale ecru tint with cream ceiling would be the best color for your parlor wall, with a rug in such strong and varied colors. You can introduce green into the furniture and hangings. The living room and hall walls can be tinted with a warmer shade of tan or golden brown with ecru ceiling. Use ecru scrim for curtains in living room and cream net or all over lace in parlor. On the outer sides of the two end windows of bay, hang a half width of 50 in. soft green drapery. Aurora cloth at $1.50 a yard is excellent, with one width on each window of lace, hanging straight, shirred on small extension rods next the glass. But on the middle window, use only lace, two widths looped back each side about half way up. The window in vestibule could have sheer, ecru net or lace very slightly fulled, shirred on small rods top and botton, but so that about 12 inches of space in center will be bare.



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Miss R.: "As I am a regular reader of your magazine, I would like very much to get a few pointers on decoration and furnishing of my house by mail, for which please find enclosed postage for same.

"First floor vestibule and hall, parlor to the left of hall, dining room off parlor extending to hall (full width of house), having an archway from parlor also another archway in parlor into hall. Library off dining room, also kitchen. I would like to know if I should use the same paper on parlor and dining rooms. Furniture for both rooms mahogany; library, mission. Woodwork on first floor grained or oak. Furniture for hall, oak. Second floor, stairs polished, three bed rooms and living room. Woodwork enamel and doors white. Furniture mahogany. What would be the best papers to use on bed room and curtains long or all short?"

Ans. It is not necessary to paper parlor and dining room alike. In fact, paper suitable for parlor would not be good in dining room, usually. Since the woodwork throughout main floor is oak with mahogany furniture, some of the neutral toned papers would be best on the walls. A rough surfaced fabric paper in warm greys, small tapestry design, would be good in parlor and hall. In dining room you might use an imitation grass cloth in dull green, with 5-inch border in dull reds, greens and blues, etc. The chambray papers in grey, blue or dull rose or green, are excellent for bed rooms. They have narrow floral borders or deep cut out frieze or get your color contrast in cretonne curtains and furnishings. Curtains nowadays are seldom made to come below the window sill or bottom of casing.

E. C. S.: "Being a subscriber of your magazine I take liberty of asking you to give me a personal reply and suggest a decorating scheme for the enclosed plan which I propose erecting.

"I would like to use dark green solid paper and mahogany woodwork for the reception hall, dining room and bed room opening into reception hall, but am in doubt as to whether this would work well with a beamed ceiling in the reception hall. Do you think the three rooms should all be finished alike?"

Ans. A mahogany finish would not be correct with oak furniture in hall and bed room. The dining room and hall should both have a mahogany stain with mahogany furniture in dining room and either mahogany or fumed oak with antique cane seats and backs, in reception hall.

As to the beamed ceiling in hall, that would be correct with either an oak or mahogany finish. The ceiling beams must of course match the other woodwork, the plaster spaces between can be white. Dark green walls would be a very poor choice anywhere. Light leaf green might be pleasing in the dining room, with white ceiling. The hall walls could be light shades of terra cotta in a self-toned figured paper. The bed room walls could be tinted with the preparation you mention, but a white stone mantel would be entirely out of place. Better have a wood mantel, same as finish of rooms, with cream tile facings.

We should paint the woodwork in bed rooms cream color, with cap moulding over baseboards, doors, etc., oak, to keep in countenance with the oak furniture.



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WE are all more or less famaliar with the painstaking housekeper who makes such a bugbear of daily living that her family and guests feel no freedom in her house. Such a one is credited with washing the broom handle after its ordinary use, and rushing to the door to warn her vistor to scrape her feet lest mud be tracked in on her hardwood floor. Life with such people is measured on a narrow scale, and one wonders if the first act of such a woman on leaving this mundane sphere will be to house-clean heaven. Such women carry the fine art of housekeping to an excess, but there are certain conditions, such as dust and bacteria, which must be fought, if only for hygienic reasons. Decay takes place in food, dust gets into the house, and mould and bacteria are liable to grow wherver they find congenial soil. When organic substances are kept clean or protected, decay is not so apt to ensue.

The natural home of bacteria is the soil. Hence, they can be brought into the house on the clothes or body. For this reason street clothes should be brushed often, and the sunlight and fresh air admitted freely to the house. In hundreds of ways the housekeeper should be on the alert tc keep her domain free from injurious bacteria, and many daily occurrences show this necessity. Changing the water in a vase of flowers, and emptying the pan under the refrigerator, being careful never to put away a damp cloth for fear of mould—these seem simple things, yet are necessary if one would keep a sanitary home. Dozens of other everyday dangers could be quoted. One of the arguments in favor of boiling and sunning clothes is that the intense heat to which they are subjected kills all the bacteria that may come from the body.

An important kitchen furnishing that requires constant care, on account of sanitary reasons, is the refrigerator. The proper place for this receptacle is in the pantry, but as many pantries are too small it is frequently placed in the kitchen, where it is exposed to dirt and dust. When it is built in a house, it often has a trap door in the back which enables the ice-man to fill it without entering the house, but the ordinary refrigerator has no such convenience, and its chief essential is that it shall be so lined that no moisture can reach the wood. For this reason a refrigerator that leaks should be attended to at once.

Many refrigerators are now placed so that the waste pipe connects directly with the sewer. This does away with the pan, and the annoyance of emptying it night and morning, but some good authorities claim there is danger of sewer gas in this way, and that the care of the pan is nothing in comparison to the risk to health. Other people let the pipe drain upon the cellar floor. This creates dampness and is unhealthful. A good, zinc-lined refrigerator, with inner lining of cha·coal, should have a removable pan. It costs from twelve to sixteen dollars. These, lined with tile or enamel are more expensive. The refrigerator should be large enough so that the shelves will hold all the food, and no eatable should be placed on the ice. Sal soda in water is the best cleanser. At least once a week everything should be taken out, and shelves and walls washed thoroughly and wiped dry. The best time to do this is



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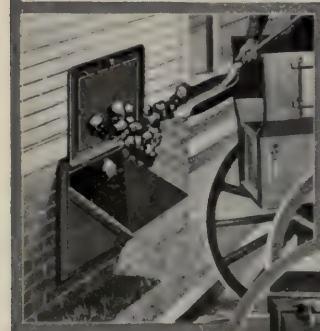
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when the supply of ice is low—usually on Monday morning—when the small piece of ice can be placed in a pan while the ice receptacle is being cleaned. Every corner should be wiped with a cloth wrapped around a knife or skewer.

The waste pipe needs special attention, for it is a fruitful source of germs. A neglected pipe is often filled with slimy bacterial growth, germs of putrefaction, which contaminate butter, milk, and other food. The pipe must be cleaned its entire length by running a flexible wire or rattan, around which is wrapped a cloth or sponge, through it. Lastly a strong solution of sal soda and boilng water should be poured down. If the water falls from the waste pipe into a trap underneath the refrigerator and from the trap into the waste pan, this ought to be cleaned in the same way, with sal soda water. A refrigerator needs constant vigilance to keep it and the waste pan perfectly clean. Warm food should never be placed in it, and the ice should be well washed before it is deposited. Some housewives cover the ice with newspapers to exclude the air. It makes it keep longer



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Another kitchen accessory that requires constant care for fear of bacteria is the sink and draining board. Unsanitary conditions not only look bad but there is danger of roaches and insects and germs that menace health. Few iron sinks are now used. When they are in the house they can be covered with white paint and several—not one but many—coats of hard white enamel. Grease should never be poured down the sink, and all vegetable parings, tea and coffee grounds and refuse should be caught in a sink strainer; a three-cornered one that fits into the sink corner is best. The refuse should be burnt or put in a garbage can. After every dish washing, the sink should be thoroughly washed in hot, clean suds and scrubbed with a tampico brush, that every crack and corner may be sanitary. The wall back of the sink and draining board should receive similar treatment, and care will prevent sewer gas.

The drain pipe is always a source of danger. Usually, the dish water is greasy and as it goes down the sink pipe the grease settles. The sink should be immediately flushed with hot water followed by cold, that the pipes may be cleaned at once before the grease adheres firmly. No matter how many times the sink may be used for dish-washing it is well to flush it in this way several times a day. Neglect to do this is one cause of sewer gas. One should not wait until an odor is perceptible but give a periodical flushing several times a day. Occasionally, a disinfectant should be poured down. A good one is chloride of lime or potash dissolved in boiling water. Another excellent wash is one pound of sal soda to three gallons of boiling water. This should be poured boiling hot down the pipes. A small quantity of the soda solution will not accomplish much. There must be enough to reach every side of the pipe and thus destroy the putrefaction that may breed disease.



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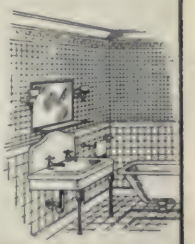
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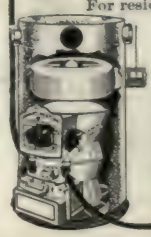
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Preparing and Serving Winter Fruits

By BEATRICE D'EMO



TWO MODES OF SERVING APPLES.

WHEN one gets on the subject of cooking winter fruits an endless list of delightful desserts is presented. Take the apple, for instance. Every woman knows how to bake an apple, but if she wants to do it in a way to make a sweet dish fit for royalty, in fact the name of the recipe is Royal Baked Apples, let her core but not peel the fruit, then fill the center cavity with chopped English walnuts mixed with powdered sugar. Put the prepared apples in a pan quite close together, then pour in a cupful of boiling water in which has been simmered the sliced peel of a lemon (sliced very thin so hardly any of the bitter white skin is attached to it). Bake the apples for twenty minutes in a hot oven or half an hour in a slow one, taking them out as soon as they can be pierced with a straw. Put them in a glass dish and pour whatever juice is left over

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them, then grate on a little nutmeg or sprinkle with powdered cinnamon. Serve with plain cream. The pictured apple tart is a variation from the usual tart, inasmuch that the pastry form is filled with tart apple sauce, then a thick slice of apple which has been cored but not peeled put on top—the slice should be at least three-quarters of an inch thick. This is sprinkled thickly with granulated sugar, dotted with butter and baked until the apple is soft, when nutmeg is grated over the top. This is a great improvement on the ordinary fruit tart. Porcupine apples



BAKED BANANAS WITH SUGAR SAUCE.

are highly decorative and universally liked. For them first make a syrup by simmering together for ten minutes a pint of granulated sugar with a pint of water. Pare and core six firm, tart apples—greenings, if perfect, are the best—put in a deep saucepan and pour over the syrup, then cook slowly until the apples are soft, but do not let them cook to pieces. Remove from the syrup to the dish in which they are to be served and fill the hollows with chopped almonds which have been blanched by soaking in boiling water until the skins slip off, when they are pressed between the thumb and finger. Split some of the almonds and stick them all over the outside of the apples. This can be more easily done if a hole is first made in the apples with the tip of a teaspoon. Pile quince or grape jelly on the top of each apple and pour around them the syrup which has been cooked for five minutes longer, after the apples have been removed. If this dish is allowed to stand for a few hours the syrup will form into jelly. Plain or whipped cream may be served.

Baked bananas are temping to the palate and are wholesome. The fruit should be slightly green and must be baked in the skin for ten minutes or until thoroughly hot all through and soft but not mushy. Carefully remove the peel with a fork, then arrange the fruit in the serving dish and pour on a sauce made by beating together the white of an egg, the juice of a lemon and all the sifted powdered sugar the egg will take up. Serve at once before the hot banana melts the sugar and egg. Bananas may also be peeled, scraped, and fried until hot in butter, then served with a sauce made by boiling together half a cupful of water and a cupful of granulated sugar.

Grape Fruit and Oranges.

When buying a grape-fruit select the heavy, smooth-skinned ones. If large, a half is sufficient for a portion, and if it be served for breakfast clip out the cork-like center with a pair of kitchen scissors, loosen the sections and remove the seeds, then fill the hollow with powdered sugar and let stand in the ice chest for two



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SERVING GRAPE-FRUIT AND ORANGES.

hours before serving—over night is really better. For a course at dinner or luncheon, when the grape-fruit frequently takes the place of clams or oysters, prepare as just described, but add—if there is no objection—a teaspoonful of sherry to each half of the fruit, and put two or three Maraschino cherries in the center.

A very delightful and simple dessert may be made of a combination of oranges and pineapple, by paring the former, slicing and removing the seeds, and slicing the pineapple very thinly, after cutting off the spiny outer coat. Put a layer of the pineapple in a glass dish and sprinkle with powdered sugar, then a layer of oranges, which sprinkle with desiccated cocoanut or fresh cocoanut grated and sweetened. Repeat until the dish is full, then top with a meringue made by beating the whites of two eggs stiff with two tablespoonfuls each of grated cocoanut and sifted powdered sugar. The meringue should not be put on until just before serving. This is one form of the old-time dainty ambrosia; and another way to prepare it is to omit the cocoanut but sprinkle each layer with sherry. The dessert should be very cold whichever way it is prepared. Bananas may be combined with the oranges instead of the pineapple.

If oranges are served raw at breakfast a dainty mode of preparing them is pictured, which is to cut the fruit into eighths, or even smaller sections, and arrange them around a salt cellar filled with powdered sugar. The sections are eaten by turning back the peel at each end and using it as a holder while the juice is extracted from the pulp. The small, rather tart oranges are the best to serve this way, as the sections are just large enough for a mouthful. For after-dinner service cut the orange peel so that it forms a little basket, as pictured, remove the seeds, and as much of the pith as possible from the pulp, pile the pieces in the basket and chill thoroughly. If the oranges are large they may be merely cut in half, like a grape-fruit, and the sections loosened with a pointed knife. Again, as a dessert, the top of fine, large oranges may be removed in one slice, then the pulp extracted with a teaspoon, leaving the skin intact. The pulp may then be sweetened and frozen in a water ice or sherbet and returned to the peel, the top put on and a filled orange served to each diner.

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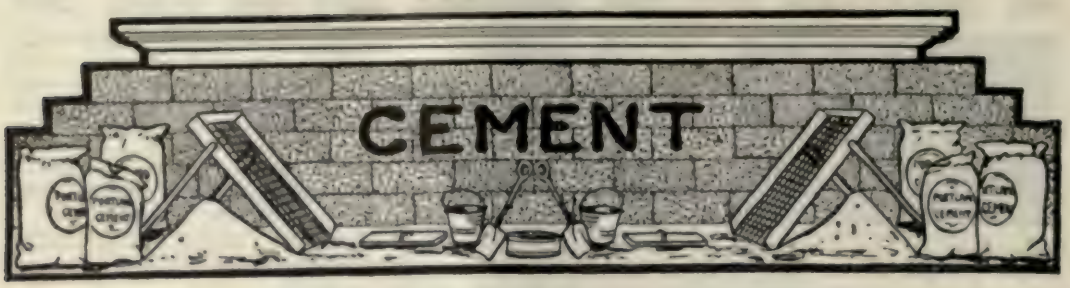
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THE increasing practice of carrying on concrete construction throughout the winter months has resulted in an accumulation of experience that should have weight with those contractors and engineers who now close down the concreting plant during cold weather. Satisfactory results can be obtained in all classes of work.

The cost of an idle plant and the cessation of profits must be considered. The actual extra expense occasioned by the protective measures necessary for safe concrete work will certainly be far less than the actual losses were work to stop. This yearly loss is not justified on the grounds of custom. It is now an unreasonable drain on the contractors' yearly profits, for the successful examples of previous winters have demonstrated the entire safety and the moderate extra expense accompanying cold-weather concreting.

However, the practice of mixing, placing and protecting concrete in cold weather in the same manner as in warm weather is most certainly to be condemned, says a writer in the Bulletin of the Universal Portland Cement Company. Freezing will not damage concrete that has had a chance to harden under favorable conditions for from twenty-four to forty-eight hours. The freezing simply retards the process of hardening, which again proceeds under favorable conditions, and in the end the concrete obtains its full strength.

Concrete that is frozen before the action of hardening has started is not apt to be permanently injured if upon thawing it is not again frozen until it has had a chance to harden sufficiently to withstand the action of subsequent freezing. Alternate freezing and thawing is very apt to damage green concrete.

A given amount of heat expended in heating materials and protecting the work from freezing immediately after placing will be infinitely more effective than an equivalent amount of heat expended in attempting to hasten the hardening of concrete that has been mixed with cold materials and subjected during the next few days to unfavorable conditions.

Heating the materials accelerates the rate of hardening, lengthens the time before the concrete becomes cold enough to freeze, and in temperatures but little below freezing will insure the hardening of the concrete before it can be damaged by freezing.

Thus it is imperative to mix and place concrete in such a manner as to insure proper hardening during the first few days.

Lowering the Temperature.

Lowering the freezing point of the concrete is probably the simplest and cheapest, but not the best method of concreting in cold weather. Ordinary salt is most commonly used, and while the addition of a limited amount retards the hardening somewhat and lowers the initial strength, the ultimate strength of the concrete is not affected by its use. More than ten per cent of salt should not be used, and this amount is not effective for temperatures lower than 22 degrees F. The use of acid in place of salt is not to be encouraged.

Large plain mass work, such as retaining walls and abutments, do not require the same care and protection as thin walls, columns, beams and floor slabs. The additional equipment considered necessary in any case for winter work is comparatively limited, consisting generally of a sufficient amount of canvas for housing in or covering the work, salamanders or other form of heaters for maintaining a temperature above the freezing point and some provision for heating materials.



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Sand and stone may be heated by piling directly upon pipe coils supplied with steam or by covering with tarpaulins and applying the steam directly to the material to be heated. **For heating water** a steam pipe placed in an ordinary barrel is not to be recommended. A suitable tank should be provided, the water being heated by means of a coil supplied with steam from the boiler supplying the mixer engine, or from one erected for this purpose.

When Not Necessary to Heat the Sand.

For heavy mass work, thick walls, abutments, etc., it is not necessary to heat the sand if dry and free from lumps of frozen matter. The water should be heated. If the concrete goes into place unchilled it will harden rapidly, as mass work retains its initial heat for a long time, and additional heat is generated during the process of hardening. If the forms are tight and made of heavy material it will only be necessary to protect the top or exposed surface of the work with tarpaulin, applying a jet of steam or by covering with boards or building paper and applying a thick blanket of straw or manure.

Careful inspection of winter work is necessary before removing the forms. Frozen concrete, which upon thawing has but little strength, closely resembles thoroughly hardened concrete in appearance, and when broken frequently shows a fracture through the aggregate, but with these precautions concrete work properly handled may be successfully carried on irrespective of weather conditions.

—Building Age.

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Why Stucco Crazes.

The crazing or hair-cracking of stucco is a universal complaint and rather discouraging to many owners of stucco covered buildings, inasmuch as a crazed stucco will ruin the beauty of any successfully designed building. The reason for the crazing of stucco varies, but the principal cause is the lack of knowledge of the mixing of the proper proportions and also the application of the material and finally the protecting of finished stucco from the elements until it has properly hardened.

Cement applied on walls in about one-inch thickness acts entirely different than when cement is poured into moulds in a compact body and the cement, while hardening, has sufficient dampness from the water of its own mixture. On the walls, the water mixed with the cement is absorbed on the back by the ground work on which the cement is applied and on the face by the air and wind in a shorter time than the cement would naturally require to harden. A stucco facing is composed of two or three coats. It depends on what finish may be desired. Naturally, the application of the cement mixture in two of three coats requires a great amount of care in order that each coat may properly adhere to the other. On the mixing of the various coats it greatly depends that the finish coat, which acts as a veneer over the undercoat, should be mixed of the various ingredients so that it will act as an elastic cover; that is, that the mixture after it has hardened shall be of a less tensile strength, and therefore less brittle than the under coat.

The cement for the final coat should never be more than one part mixed with three parts of good, sharp, washed sand or marble grit, and also with a very small proportion of lime. This lime should be fresh-burned shell lime; if this is not obtainable, a good quality of hydrated lime may be used. This mixture (after the ground coat is well wetted down with clean water until it can absorb no more), is applied in the regular method and if properly floated and padded will eliminate the crazing and at the same time the lime will act as a waterproofer to a reasonable extent. —Record and Guide.



Residence of A. Salisbury, San Antonio, Texas.

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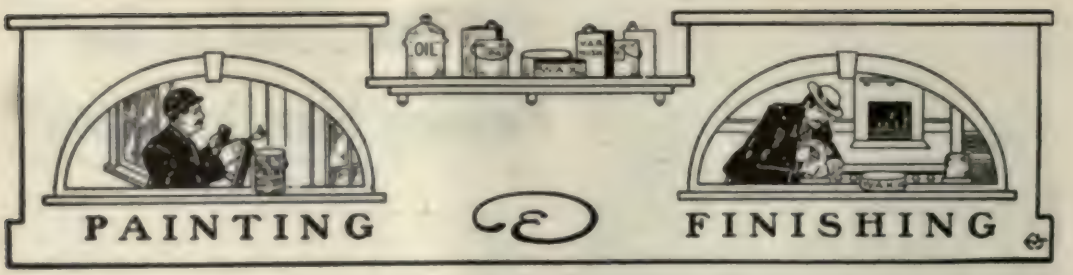
This book will prove to be one of the most interesting of Keith's Publications, and of great value to the home builder.

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Interior Decoration
Entrances and Vestibules
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Dens and Fireplaces
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PRICE, ONE DOLLAR

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The Failure to Paint Greater Than the $250,000,000 Annual Fire Loss.

By Dr. Geo. B. Heckel

SOME years since, the writer, as an after-thought, added the following sentences to the title page of a booklet on paint: "Paint is as important as fire insurance. A building may never burn, but unless constantly protected by paint it will surely decay. Decay is slow burning: paint is insurance against decay."

This statement elicited prompt protest from the fire underwriters, and it was necessary to point out the context, in which it was stated that "The man who understands the value of paint will look on it as an insurance policy against decay, and will as carefully renew his paint as his fire insurance."—the inference being that the wise man needs no prompting to keep up his fire insurance. The protestors were not wholly satisfied, but they at least realized that no depreciation of fire insurance was involved.

Now, after the lapse of some five years, the same conviction is creeping into the literature of the paint trade, and it really seems that the hard-headed people of the United States are beginning to realize that the small leak requires at least as much attention as the occasional catastrophe.

I have before me an article by Powell Evans in the Augusta (Ga.) Herald, in which figures are given which indicate the annual fire loss in the United States to be about $250,000,000, while this waste added to the cost of fire departments and patrols is computed by the United States Geodetic Survey to amount to $400,000,000. This is, of course, an enormous drain on our resources, and should be reduced by every possible means; but what about that other loss which goes on constantly, but which as surely reduces buildings to gas and dust as does a great conflagration?

Steel or wood in a vacuum will, so far as we know, last forever. Steel or wood, exposed to the elements, will degenerate and disintegrate just as certainly as if it were fired by an incendiary. And, to continue the parallel, the process is essentially the same—oxidation—the chief difference being that one is rapid and the other slow.

We may escape fire. I don't know the proportion of buildings burned to buildings not burned, but it must be comparatively small. In my lifetime I have lived in at least twelve different houses, and not one of them has yet burned down, though four of them passed through the great Chicago fire.

Furthermore, if one of these houses does burn down, the fire insurance companies will make good at least a part of the loss.

Some of these houses, however, have either fallen down or been practically rebuilt throughout since my boyhood, simply because the owners, while making ample provision against the fire that has never occurred, overlooked the slow conflagration of the elements which was occurring every day and all day. Others of these houses have been properly cared for, and one, especially, after over sixty years of service, is still in practically as good condition as when built. The entire difference is due to paint. The house that lasts and does not succumb to that slow burning which we call decay, is the house that is kept properly protected by paint. "Paint is insurance against decay."

Hints on Inside Work.

White pine is an excellent wood for paint finish, but the best qualities are expensive. White woods of various kinds are about as good as white pine. Poplar makes about the best wood available.

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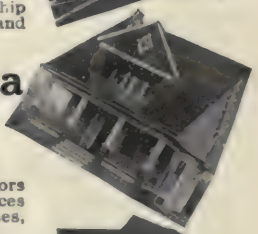
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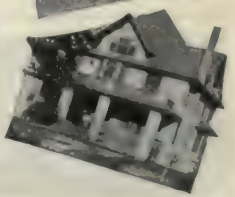
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There is no resin in it, and the grain is good.

For the first coat mix white lead and oil, for the second the same, if more than two coats are put on; for the third use about half oil and turpentine; if a fourth coat is put on make it all turpentine and lead for a flat finish. Regardless of the number of coats, the idea is to use more turpentine than oil on the last coat to keep the work from having too glaring a finish. Turpentine "flattens" it.

Shades.—There is no end of choice inside as well as out. Cream is a good color and hides the defects of the wood better than white. For a new house a cheerful tint should be used.

White Enamel.—This excellent finish is becoming more popular than in former years for bed rooms, kitchens and bath rooms.

Number of Coats.—Common houses are often finished with only two coats. I have seen six or seven applied to some houses. If pure white is desired it is impossible to get good results with fewer than four. This is what makes the white and gold finish so expensive, apart from the gold leaf, but it remains fashionable amid the wreck of mammon and the crash of contending women.

Straining.—All paint should be carefully strained through a piece of fine fly-screen netting or cloth.

A little turpentine added to the water used for scrubbing floors will give a delightfully fresh smell to the room.

—The Building Age.

Suggestions for Inside Painting.

The usual finish for oak is one coat of filler, one of grain shellac, two of varnish, and rubbing down. Sometimes the filler and one coat of varnish is made to serve on cheap work, and the rubbing down is omitted.

Fillers.—Paste filler, and not liquid filler, is used on oak. It is thinned down with turpentine and brushed on. Grain shellac, and not wood alcohol shellac, is used. The grain costs about twice as much as the other. The work between the varnish coats is rubbed with light sandpaper to a smooth surface. If an egg-shell gloss is wanted, rub down with powdered pumice stone and linseed oil. Steel wool is used for rubbing down. It does the work faster, but leaves a poorer job.

A prepared varnish gives the effect of a dull finish at a lower cost than by rubbing down.

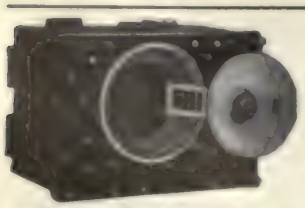
Staining.—It was formerly customary to finish oak in the natural color of the wood. We now improve upon nature by staining nearly all the oak that is used. There are all shades of stains. It is not advisable to use one that is too dark. It may suit the taste at the time it is applied, but it will come to look too like an undertaker's room to permanently please in a home. The stain is sometimes mixed with the filler, which saves times and gives good results, or it may be applied after the oak is filled.

Sash.—Sash and frames have to be finished to correspond with the room. The frame is covered with oak stop and the rest stained. On a brick building an oak facing is put on the box. The sash are usually of pine, but on the best houses the inner half matches the woodwork of the room.

If a water stain is used there must be plenty of sandpapering to rub down the grain of the wood. Putty must be colored to match the stain.

Oak may be darkened by using several thin coats of ammonia. One heavy coat might do the work quicker, but make the surface too dark.

There is more trouble with maple floors than with oak, and this in spite of a dozen floor finishes that are for sale. Sometimes it is treated to a coat of liquid filler and two coats of wax. Boiled linseed oil is occasionally used. This finish makes the floor look too dull, but if it is applied often enough it gives a lasting surface. It should be rubbed off and dried with a cloth as quickly as possible after it is put on. It should not be allowed to get gummy. A finish recommended by some is one coat of grain alcohol shellac and two of floor wax.



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Many of the houses erected in the days of powdered hair and minuet we still admire and wonder at the remarkable state of preservation in which we find them.

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Dutch Boy Painter White Lead



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We have a book of color schemes for both interiors and exteriors which will interest you if you are contemplating painting.

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Heating, Lighting and Plumbing



Do Gas Lights Contaminate Air?

FOLLOWING closely upon the doubts expressed as to the value of the carbon dioxide test for determining the purity of air, the statement is now made that gas lighting, so far from having a deleterious effect upon the air in a room, has a positively beneficial effect upon such air in adding to its hygienic value. Just how this is accomplished is explained by R. F. Pierce, in The Illuminating Engineer. One of the greatest advantages of gas lighting, he states, and one that strangely enough has received little or no attention, is the highly beneficial effect upon the quality of the air in illuminated interiors. As this effect is not at all obvious, but, on the contrary, the reverse would, upon casual consideration, appear to be true, it is highly desirable that the facts in the case be set forth in such a manner as to admit of the rational comparison of different illuminants in this respect.

Many people carelessly and unthinkingly assume that because the burning of a gas light discharges products of combustion into the room, a perceptible vitiation of the atmosphere must result. As a matter of fact, the precise reverse is the case, and this fact really constitutes one of the greatest advantages to gas over electricity for illuminating purposes.

The combustion of gas produces, from a chemical standpoint, four different effects upon the air taken from the room, mixed with the gas in the burner and discharged back into the room.

These effects are:

First—The amount of oxygen is reduced.

Second—The amount of carbonic acid gas (CO_2) is increased.

Third—A very small amount of sulphurous gas (SO_2) is generally added.

Fourth—Organic impurities and, as a matter of fact, deleterious substances are removed by incineration.

It is evident that the absurd practice of rating each gas burner as equal to a certain number of human beings in vitiating the air in interiors is not only highly ridiculous, but precisely opposite to the dictates of common sense and the testimony of established facts; for, as will be shown later, the presence of gas burners actually removes the vitiating matter.

The first, second and third effects are caused by the oxygen combining with the carbon and sulphur contained in the gas, and this oxidizing process generates heat in sufficient quantities to raise the mantle to the temperature of incandescence—about 1500° F., which is sufficient to produce the fourth effect.

The physical effects produced upon the air are:

First—The temperature is increased.

Second—The circulation of the air in the room is accelerated and the ventilation improved.

Learning to Use Light.

In these days when every one has so much to say about efficiency, illuminating engineering is of the first importance. In order that employes may work rapidly and well they should be protected from needless fatigue. About the quickest and surest way to tire out a roomful of people is to flood the room with a uniform light at high intensity. Where work is to be done by artificial light the general illumination should be moderately low with local lights of higher intensity above the work bench or desk. And, by the way, the average desk light or reading lamp is too low.

The color of the light, too, plays an important part in tiring people out. Fatigue occurs far more quickly with orange and yellow rays at high inten-

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THIS is the material that protects concrete floors against abrasion and wear, and against the absorption of moisture, oil, grease and disease germs, and makes them sanitary and beautiful. It is made in Light Drab, Dark Darb, Terra Cotta, Tan, White and Transparent. It is the most satisfactory material made for concrete floors and

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sities than from green and bluish green light like that from the mercury vapor lamp. Nothing equals the bluish white of diffused daylight.

In other ways color plays an important part. If there were such a thing as an untidy housekeeper she would doubtless be glad to know that colors resulting from age and dirt may be obscured if not altogether hidden by using a reddish yellow light like that from a carbon filament electric light or a candle, for these rays harmonize with the typical yellow or brownish shades of dirt. The bluish green mercury light, on the other hand, exaggerates blemishes and dirt, while the white arc light is nearly as bad. Mercury and arc lights are also too harsh and disagreeable for use in the ball room. There the yellow carbon filament is the best.

Shadows also have an important part to play. In fact one of the principal aids in distinguishing objects is the differences in brightness. If there were no shadows but only a perfectly diffused illumination of high intensity it would be hard to see clearly. In order to have shadows there must be directed light from one or a number of sources and not merely diffused light coming from all directions. There must be enough directed light to mark the edges of objects by shadows and also enough diffused light to enable one to see clearly in the shadows. The directed light should come from above at a considerable angle with the horizontal so as to limit the length of the shadows. There are cases, however, when a combination of directed and diffused light will not answer. In a flour mill or a foundry, for example, where everything is of the same color diffused light would be pactically useless; but in a draughting room where all the objects requiring distinction are in one plane a directed light casting shadows would be equally objectionable.

To light the home with comfort and economy requires a combination of concentrated illumination of fairly high intensity at the dining or reading table with a general illumination of low intensity. The lighter the walls and ceiling are the more light they reflect to give the required diffused general illumination and so less direct light will be needed. As artificial light is deficient in blue and green rays walls and ceilings of a bluish or greenish shade gives them greater reflecting power for daylight than for artificial light, which is generally desirable.

Illuminating engineering is rather a complex art, for it embraces architecture, decoration, color effects, optics, physics, physiology, and psychology in addition to the commercial aspects of lighting. While much remains to be learned, the progress already achieved makes recent ignorance of the elementary principles of lighting seem appalling. As recently as two years ago the only thing considered was the specific density of illumination, regardless of anything else. But now it is understood that the quality and direction of light, quite as much as the quantity, have a most important effect upon the eye. The color of the light, too, is carefully considered in adapting illumination to the specific purpose for which it is required. There is a great difference in the color of artificial lights. The old carbon filament incandescent lamp, the flaming arc and the plain gas flame give a yellow light, the mercury lamp a greenish light, the Tungsten incandescent lamp a so-called white light, while the Moore vapor tube approximates daylight so closely that it can be used in matching colors with perfect satisfaction. Each form of light is adapted to some particular use. It is the business of the illuminating engineer to select the right light for each purpose and see that it is used in the proper way.

—Tech. World.

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they are combined with beauty, making this the most practical, economical and *most widely used* lawn fence on the market.

It is chosen by the **most particular** because of its design, and by the **most careful** buyers because it outlasts any other and is the cheapest fence made *in the long run.*

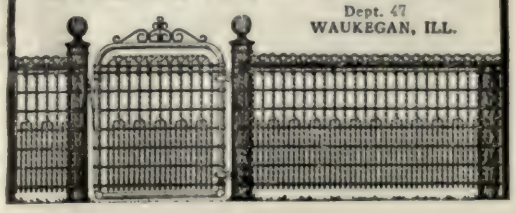
It is made of large, heavily-galvanized wire, **rust proof, self-adjusting to uneven ground** and easily put up on wood or iron posts.

We have grown and prospered until our factory is now the **largest and best equipped** of its kind in the country. Our progressive spirit always leads in designs and methods of construction. We stand behind every foot of fence we sell and **guarantee it to satisfy you.**

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SPLINTERS AND SHAVINGS

BUILDING COSTS IN 1912.

Extract From Statement to Thompson-Starritt Co., by the President, Louis J. Horowitz.



HAVE in mind the present building costs as against those which prevail during a 'boom' period. Adhering to the over-built theory, let us assume that the owner of an office building now in course of erection may have to wait a year before leasing his entire available space. It is my contention that the saving to him in the present cost of construction will far more than offset any possible temporary loss of rental.

"To illustrate: A building which would normally cost $2,000,000 can be erected during times like the present for $1,800,000 or less. This statement is borne out by the costs on buildings we are now erecting. Is not the loss, say from $50,000 to $75,000 in rental far more than offset by the saving of $200,000 in the cost of the building? Thus the alarmist clouds have an optimistic lining after all.—Building Age.

Pointers on Cellar Excavation Work.

We are quite likely to slight the parts of a building which are out of sight, and the cellar of a house is one part which sometimes gets slighted more than it should.

It is generally best to have a cellar under the entire house, but in cases where this is not desired care should be taken that the excavation for the walls are sufficiently deep to avoid trouble from frost and to provide good drainage, so that there will be no large amount of water under the walls.

In excavating for the wall it is well to go eight or ten inches beyond the line of the walls. This gives a chance to lay a line of tile outside the wall and have it low enough to take care of all water which may ever be there.

You are likely to get a better wall excavating beyond its face than you would if it were laid against the bank. Then you may have the wall plastered on the outside and may have the dirt puddled and rammed in against the wall, all of which tends to make a dry cellar.

Another reason for excavating beyond the wall is that you want a footing course which shall extend at least six inches beyond each side of the wall. This may be of broken stone or of concrete and should be entirely below the level of the floor. You should also see that the drain is below the level of the floor and that the floor will have a slight slant toward the drain.

In places where drainage is not practicable, additional precautions should be taken to guard against trouble from frost. This means to make the excavations and footings deeper and to keep the water out of the wall by waterproofing the outside.

Excavations for porch piers or for any wall, not enclosing a cellar, should be deep enough to have the bottom below frost, from three to four feet.

The same caution should be observed in excavating for drains. The best method of doing the excavating will depend largely on circumstances. In most cases, a team, plough, scraper and wagon can be used to good advantage.

In some cases it will be desirable to save the top soil for grading. If this is done it must be removed to suitable places. The proper disposal of the dirt will depend on the nature of the soil, the depth excavated, the nature of the site and the size of the cellar.

After ploughing the area and scraping out as much as is practicable of the dirt, we can use a wagon by leaving an easy grade at one corner or by digging out where the cellar-way is to be. If there is not room to turn a team and wagon in the cellar, they can be backed in. When the site is on a hill, considerable dirt can be wheeled out in wheelbarrows, either through the cellarway or through excavations for the drain.

Mr. Builder:

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We have been lumber-jacks and mill-owners and then had 20 years of actual experience in the lumber business, in which we are today. During all this time every shipment has had our personal inspection and has been made at the very lowest rock-bottom figure. This is the way we have built up our tremendous business.

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If the cellar is small and not too deep a man can throw out considerable dirt with a shovel, but, of course, cannot throw it far.

It will generally be necessary to employ this means at the last and there will be enough dirt to be shoveled out after making use of other methods.—National Builder.

Oak Flooring Material.

Vitruvius was an architect of Rome a few years before the beginning of the Christian era. He published a book about B. C. 25 which bears his name. It is considered the oldest book on the architecture of antiquity that is known. In this book there is a mention of sawed timber, and it is likely that planks or boards were sawed, perhaps with hand saws similar to the "pit" saws of our grandfathers. Vitruvius writes that oak boards were used for floors, and recommends that each board be nailed with two iron nails to every joist. This sounds very much like our own modern specifications, inasmuch as there is a special oak floor at the present time made with holes bored through the face for nailing.

Oak has always been taken as an example of strength and endurance from the very beginning of civilization. The oldest hewn wood in existence today is from the oak. No other kind of wood would have stood this supreme test of time. It is not alone the age that oak attains that always made it renowned, but its lasting qualities and strength when put into use for any purpose. It is considered by authorities on wood and interior decorations, as the best for all flooring purposes, and combines beauty, distinction and durability.

Oak Flooring Grading Rules. Revised.

The grades of Oak Flooring shall be known as "A" GRADE, SAP CLEAR, "B" GRADE, COMMON and FACTORY.

Quarter Sawed.

"A" Grade (Clear).—Shall have one face practically free of defects, except ⅜ of an inch of bright sap; the question of color shall not be considered; lengths in this grade to be 2 to 16 feet, not to exceed 10% under 4 feet.

Sap Clear (Sappy Clear).—Shall have one face practically free of defects, but will admit unlimited bright sap. The question of color shall not be considered. Lengths in this grade to be 1 to 16 feet.

Plain Sawed.

"A" Grade (Clear).—Shall have one face practically free of defects, except ⅜ of an inch of bright sap; the question of color shall not be considered; lengths in this grade to be 2 to 16 feet, not to exceed 10% under 4 feet.

"B" Grade (Select).—May contain bright sap, and will admit pin-worm holes, slight imperfections in dressing; or a small tight knot, not to exceed 1 to every 3 feet in length; lengths to be 1 to 16 feet.

Common (No. 1 Common).—Shall be of such nature as will make and lay a sound floor without cutting. Lengths 1 to 16 feet.

Factory.—May contain every character of defects, but will lay a serviceable floor with some cutting. Lengths 1 to 16 feet.

Dripping Roofs.

Dripping roofs have been placed under a ban at Fond du Lac, Wis., where the council has ordered that roofs or cornices which overhang the walk line must be equipped with gutters or other forms of preventing the drip from falling to the walk. The downpour of rain from the edge of a building is unpleasant, and where the stream is augmented from a valley on the roof, it is worse. In the winter, the icicles which hang from such edges are dangerous. Yet it is no uncommon thing to see spouts pouring water down upon a walk and dangerous icy spots forming in cold weather. They should be forbidden and the prohibition enforced.

Right to Lien for Materials Furnished But Not Used.

The law does not secure a lien upon a building for materials furnished and necessary for its completion according to the original plan, but left unused by reason of a change of plan by the owner after the materials have been delivered. (California Supreme Court, California Portland Cement Company vs. Wentworth Hotel Company, 118 Pacific Reporter 113.)



AFTER 29 YEARS
NOT RUSTED YET

This picture shows a few "MIFCo" shingle nails that have been in service for 29 years.

During all this time these nails have been in use on a shingle roof less than one mile from the seashore on Mr. M. P. Harding's store at Branford, Ct.

These shingle nails have been exposed to salt air, to rain and frost and snow, till the wooden shingles have become badly rotted.

But not one of these heavy zinc coated nails rusted. Not one broke off, or lost its grip on the weather-boarding beneath until pulled out by force.

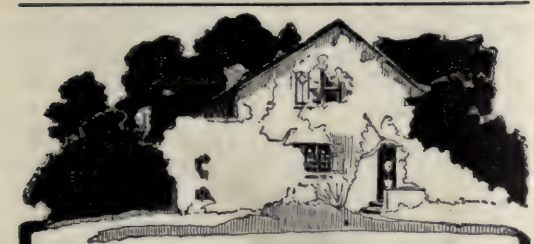
That most of these nails were bent in drawing, proves that "MIFCo" nails do not rust and enlarge the nail hole, that frost cannot lift them, that they outlast the toughest wood.

We have other owners' stories just as convincing as Mr. Harding's. We have "MIFCo" nails from more than 20 other roofs almost as old as these illustrated.

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the magazine for the man or woman who wants to make the most of the home where there is little or much to spend. *House & Garden* brings you into homes whose owners have planned them with wonderful ingenuity and individual taste, it shows distinctive decorative effects, portrays successful gardens and beautiful landscape results and, best of all, tells you just how to secure each one of these things and at what expense, while a profusion of actual photographs aid in planning the many details that insure a home of individuality. On mention of this magazine and receipt of 25c we will send postpaid, the current Building Number of *House & Garden* and include *Inexpensive Homes of Individuality*, FREE.

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¶ OAK FLOORING laid forty years ago in public buildings is still in good condition, after very hard service. For durability, OAK is the best.

¶ Any truthful landlord will advise that OAK FLOORING is a **splendid investment.** No other part of the interior finish will **increase the renting and selling values** like OAK FLOORING.

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The Oak Flooring Bureau

863 Hammond Bldg., Detroit, Mich.

Growing Demand for Metal Roofing.

"A significant tendency of the times is shown by the increasing amount of metal roofing used in rural communities and smaller towns," said Mr. Harry Fulenwider, treasurer of the East Birmingham Iron Roofing and Corrugating Company to a Birmingham daily paper.

"The feature is plainly indicated by the large increase in the percentage of orders received by us from dealers in small country towns for the farmers and citizens of their districts. Our receipts from such sources having been augmented sufficiently in the last 60 days to make the tendency apparent.

"In the mind of the observant man interesting deductions arise from this fact. One is that the rural communities, villages and towns are more prosperous than in the recent past, a condition corroborated by the reported 'bumper' crops from many sections. Another is the protective feature is being more and more realized by those who own their own homes, metal roofs being 'insurance in themselves' against fire and other minor troubles with which all who live under shingle roofs are conversant. Rates for insurance are lower, too, on metal-covered dwellings.

"A good metal roofing is leak-proof, wind-proof, rust-proof and above everything else, fire-proof, and as this fact becomes more widely disseminated the demand for such material will grow apace.

"It gives a man in the rural districts, say miles from the nearest fire-fighting machines, a great feeling of security to know that his dwelling is safe from that source of alarm which gives more trouble in the country than any other, destructive fires.

"Statistics show that 42 per cent of the residence fires in the southern states originated in the roof, an appalling percentage when all is considered. There are so many other legitimate uses for lumber, and in many channels the demand is growing, that it is not 'knocking' the old-fashioned shingle to advocate metal roofing in the ordinary sense of the word and the greater protection from danger or damage by fire makes it far more consistent in dealers in both to advocate the latter.

"The growth of the demand for metal roofing in the smaller communities, in connection with the inferences drawn above, indicate another thought—the increase in the adoption of up-to-date methods in the farmer's life in many ways, metal roofing's increased use being significant of that tendency also."

Inutility of a Cost Restriction to Prevent Neighborhood Depreciation.

In a number of suburban places in and about Philadelphia the plan has been tried of inserting in the deed for the sale of the land a provision that the house to be erected thereon shall not cost less to build than a certain stipulated sum, the idea back of the restriction being that this cost limit will operate to prevent the depreciation of surrounding property by interdicting the erection of cheap and ugly houses. The plan failed of its purpose in a large number of instances, because, as might have been foreseen, the question of cost has really little or nothing to do with the exterior charm of a house, artistic feeling being as possible to a home builded at a cost of five thousand dollars in the hands of an architect capable of crowding his resources as it is impossible in a house costing twenty-five thousand dollars in the hands of an owner or architect destitute of or wanting in correct ideals of taste. The sensible plan, to insure the result aimed at in restrictions of the kind, is to adopt some such scheme of procedure as that in vogue at Roland Park, Baltimore, regarded as, perhaps, the most beautiful suburb in the country. Here, in place of a cost limitation, there is inserted in the deed a clause to the effect that no owner may build until his plans have first been submitted to and approved by a kind of Home Owners' Defence Society made up of the founders of the Park. The outcome is a suburb where the homes vary considerably in cost and reasonably in style and design, but where a certain level of taste and congruity has been vigorously enforced to the lasting beauty and comfort of the suburb as a whole. There is no uneasiness over the possibility of this level of taste being lowered, for the reason that every owner is aware of the requirements he assumes in buying.

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Metal Spanish Tile Roofing

Its scores of vital, practical advantages cost no more than common roofing, yet mean tremendous economy—it needs no repairs and outlasts several ordinary roofs because of its practically indestructible metal construction.

It is absolutely wind, weather, storm, fire and lightning proof.

Easy to apply. No soldering, no special tools—any ordinary mechanic can apply it. Interlocking system by which tiles dovetail into each other makes the roof absolutely water tight and provides for expansion and contraction perfectly—summer and winter. It is guaranteed non-breakable.

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The **Leader Iron Works** are sending out a very comprehensive and instructive booklet catalogue E for 1911, setting forth the merits of their Water Systems —Tanks, Pumps and Power. The illustrations are partly in color, gaining in clearness thereby, and the descriptions and tables very full and complete.

The Leader is now prepared to furnish hand power plants all ready to connect with suction and discharge, shipped complete, tested and crated, thus doing away with the trouble and expense of fitting extra parts. Their new Domestic engine is of special interest to homebuilders.

* * * *

The attractive little booklet of the Sherwin-Williams Co., called **The Spectrum,** issued monthly, contains many practical suggestions on interior decoration for homebuilders. Among these the series of hints on Stencil Decorations, which has been continued thru the fall numbers of the Spectrum, is especially helpful. Some very artistic designs in colors are shown, with directions for using them. The reader is also referred to their book, "Stencils and Stencil Materials," for fuller treatment of the subject. These publications are mailed free on request.

* * * *

The Southern Cypress Manufacturers Association, New Orleans, have taken a unique method of calling attention to their specialty, "Cypress—the Wood Eternal." They send out a small pocket library in several volumes, bound in scarlet. Vol. 8 contains photograph of a bungalow built from cypress, with working plans on large sheet attached and folded up in the booklet, also complete specifications for carrying out the plans, with guide for interior and exterior finish. Nothing so helpful to contractor or carpenter or local builder in so small a compass has been issued in such practical form.

The Concrete Age Publishing Co. have just issued a new book, "Practical Cement Work," which is of special interest to anyone identified with the cement or building industry. The volume of 110 pages is in a convenient size for carrying in the pocket and handy for reference. The author, W. B. Henry, has here compiled much practical information in cement construction, gathered from twenty-five years of experience in his craft of mason and cement worker, much experiment work and intimate acquaintance with methods and principles. The mechanic who aims to be something higher than a common laborer will find this book well worth studying. Price, 50 cents.

* * * *

A. A. Vantine & Co., New York, issue an illustrated catalogue of some of their specialties, which is a convenience to those living at a distance from shopping centers who desire something different from the wares ordinarily found in department stores. The catalogue presents a number of moderately priced articles, most of them Oriental, in Porcelains, Wicker, Teakwood and Brau, as well as semi-precious stones mounted in Oriental style. Sent free on request.

* * * *

The Corbin Hardware Co. have placed a new door check and spring upon the market and send out a booklet with cuts and description. The new model has an automatic attachment, adjusted to hold the door at any point and is supposed to be the best ever.

* * * *

The Red Cedar Shingle Manufacturers' Association are sending out a little book which contains very valuable information for those who are interested in building and many unique and original ideas may be obtained from it. This helpful booklet will be sent free upon request, addressing them at Seattle, Wash.

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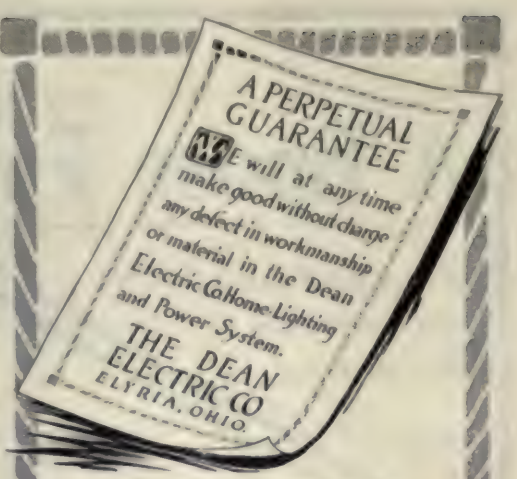
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ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

THE JOURNAL OF MODERN CONSTRUCTION
IDEAL HOMES MAGAZINE

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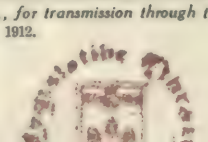
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DETAIL OF FRONT ENTRANCE OF "A HOUSE BUILT FOR SUNSHINE."

KEITH'S MAGAZINE

VOL. XXVII MARCH, 1912 No. 3



A House Built for Sunshine

By SYLVANUS B. MARSTON

EXCEPTING three stipulations regarding the price limit, number of rooms, and last but most emphatic instruction, that all rooms must have east, south, or west exposure, preferably east, with plenty of good sized windows, the owner of this delightful house gave the architect *carte blanche.* The lot on which the house was to be built had an east frontage of one hundred feet, so there was abundant room to carry out almost any reasonable building scheme. The architect succeeded admirably, as can be seen from the accompanying floor plan, almost every room having been arranged for an east exposure. From year's beginning to end, this is a veritable "summer house," for sunbeams frolic in every portion of it, some time during each day, while those rooms



FRONT PORCH OR TERRACE SHOWING SIDE DETAIL OF FRONT ENTRANCE.

having southeast and southwest exposure, are cheery from morning until night.

In striving to make the floor plans meet the family requirements, people often neglect to allow for plentiful admission of sunshine. Frequently it seems impossible to avoid locating some rooms on the north side of the house where they get no enlivenment except a cold light—for, though sunbeams can do lots of things, they rarely perch on window sills having a north exposure. North rooms are decidedly undesirable, except perhaps, for use during hottest summer days, and it is always well to strive to eliminate the north room from the home.

Nothing equals sunbeams for clearing our hearts, as well as our houses, of shadows and cold. A house can, with numerous east, west and south windows, be made into a sun theater, where Old Sol can hold continuous performances without stopping for breakfast or lunch. Sunbeams are the best of disinfectants after an epidemic of either sickness or sorrow, and the man who economizes on windows, or gives little thought to their location, economizes on health and good nature, and shuts a lot of pleasantry out of his life. And even if the "man" does arrange for many and well placed windows, there is some times the "woman" who insists on keeping the shades drawn to prevent rugs, draperies and wall paper from fading. Furnishings fade from too much light. Humans fade from lack of it. Of course it is every woman's privilege to decide which is most important to protect—her furniture or her family.

The dominant idea in building the house shown in the accompanying illustrations was "sunshine." While two of the rooms, the dining room and one bed room, as can be seen on the plan, are on the north side of the house, both have east exposure as well as north, and are

therefore bright and cherry in the morning. The kitchen, to be sure, is on the north side of the house, but that is where a kitchen should be. When stove and oven are in operation, sunshine makes a kitchen uncomfortable, and the cooler a kitchen naturally is, the better. When preparing meals the housewife and the maid are usually too busy to think of sunbeams, or anything, in fact, except potatoes, baking powder, etc. It is when they get into the "leisure" part of the house that sunbeams really count for most. The screen porch in this house is bright and sunny part of the day, and is a pleasant place to work if one wishes to be in the open air. While this kitchen is on the shady side of the house, it is always light and cheerful, owing to the finish, white enamel and white tile. Although a white kitchen requires a little more scrubbing than one with darker decoration, it more than repays the trouble it causes, by its good looks. Even the most irascible cook is apt to be good humored in such a pretty kitchen. A white kitchen is a promotor of good housekeeping, in fact it demands cleanliness. A dark kitchen never looks especially immaculate, even when it is clean. A clean, white kitchen is a "joy forever," a room the housewife is always proud to show her friends.

The dining room with its wide east windows, its rich wood panelling, its handsome built-in buffet, and its warm red color scheme, is most attractive. But daintiest, prettiest, and best loved of all rooms, is the little breakfast room, which is a symphony in Delph blue and white. The lower portion of the plastered walls is tinted a deep blue, and divided into eighteen-inch panels by means of three-inch wood strips, painted white. This paneling is topped by a plate rail, and above this is a hand-painted frieze show-



LOOKING FROM DEN ACROSS LIVING PORCH INTO BREAKFAST ROOM.



LOOKING FROM LIVING ROOM INTO DINING ROOM.

ing quaint Dutch scenes. The ceiling is palest blue. The electric fixture is of brass and crystal, window hangings of blue and white Japanese crepe, the rug, blue and white straw of finest Japanese weave. Chairs and table are of odd design and are dark, thus affording pleasing contrast to the rest of the room. A breakfast room always economizes labor, for it saves cluttering up the big dining room three times a day. If there is no servant in the house, the family can eat in this room altogether, except when there are guests who require, or rather deserve "big" hospitality.

Another delightful feature of this most delightful house is the enclosed porch between the breakfast room and the den. This porch is approached from the living room and from the two above mentioned rooms, which enclose it on three sides, by double French windows. The south side is screened and opens into the rose garden. This porch is almost entirely protected from the weather, and is, of course, secluded from the street. It is a charming rest spot, quite free from the possibility of outside obtrusion, and is luxuriously furnished with wicker lounging chairs, a couch piled with soft gay pillows, tables, tabourets, and rare Japanese urns filled with beautiful growing ferns.

The den, in furnishing and finish, is a study in browns, reds and tans. The lower walls to a height of six feet are of red pressed brick, corresponding with those used in the fireplace. Above this is a frieze of odd tapestry paper in red, tan and brown. On the west are two wide casement windows, on the south, three, so the room is flooded with sunshine from morning until night. It is small enough to be cozy, and large enough to give comfortable breathing and lounging space. Furnishings are mostly in brown wood

with brown leather upholstery. Hanging on the walls are interesting old arms, while on mantel shelves and plate rail, are many steins of wonderful workmanship, design and material.

The largest room in the house, 18-6x26, designated as living room, but which, properly speaking is the "guest" room, is finished in ivory and green. All woodwork, including the mantel and the box beams on the ceiling, is done in ivory enamel. Tiles in the hearth and around the grate are a rich green in color, and blend with the wall paper which in its design, shows several contrasting shades of green. Excepting two or three pieces of handsomely carved teakwood, the furniture is mahogany handsomely upholstered. Bric-a-brac in this room consists of rare pieces of bronze, hammered brass, cloisonne and Satsuma. Almost half of the entire front of this room is a windowed alcove, which not only lets in a world of sunlight, but presents a charming view of the terrace and the garden.

The hall is paneled in native California redwood, which is of exceptional grain polished to a high degree. In appearance it strongly resembles mahogany, but is even more beautiful because of the grain. The hall is entirely furnished in carved teakwood.

The house is so arranged there are four large bedrooms facing the east, and one facing the southeast, all of them having abundance of sunshine. One of these bed rooms is finished in white enamel, with yellow hangings, yellow flowered wall paper and white and gold furniture. Another is done in white enamel with a rose pink color scheme. The other two bed rooms are finished in native redwood, with furnishings of mahogany. In California, a house is but half a house without a sleeping porch. This home has two screened sleeping porches, besides a good



A COZY LITTLE DEN.

sized balcony and a spacious upper porch with a pergola roof. The latter is often used for sleeping purposes.

Not only is this home thoroughly and delightfully livable, but it is an investment to attract consideration. During the "tourist" season in southern California which is of about six months' duration, this house rents for $500 a month. In the meantime the family enjoy a pleasant change, either boarding, traveling or living in a quiet picturesque little bungalow. The balance of the year they live "at home." Many people consider a home an expensive proposition, one necessitating taxes, loss of interest on money invested, etc., but if managed in this way, a home is a "provider."



The architectural scheme for the exterior of this house, Mexican-Spanish, with here and there an intimation of Indian Pueblo and Moorish, has been cleverly and carefully worked out by the artist architect, so that the finished house is a picture, not only in lines and material, but in color. It is a part of the atmosphere of the southwest. The main roof, as well as the smaller balcony and porch roofs, are of crimson Spanish tiles. The walls are of rough plaster over metal lath, and in color are almost white. The massive weathered timbers projecting from the facade, give a touch of Indian Pueblo element, as well as of contrasting color. Black iron is well placed in the quaint iron balconies, in the "Spanish" entrance door, and in the porch lights.

The wide terrace is of cement and extends across the entire front of the house and fourteen feet to the south. Tubbed palms, rare shrubs and trees, and pillowed lounging chairs are scattered comfortably along this space, making a semi-tropical outdoor living room of great beauty. The broad-topped cement wall of this terrace is just high enough to afford privacy from the street.—Helen Lukens Gaut.

Dimensions.

Ground—front of house 58 feet, with terrace 72 feet; side 62-8.

Living room—18-6x28.
Dining room—15x15.
Hall—11-8x19-6.
Kitchen—11x13.
Breakfast room—8-8x13-2.
Terrace—14-2x72.
N. E. bed room—14-9x16-11.
Middle bed room—13-2x14-9.
S. E. bed room—14-9x16-11.
S. W. bed room—14-9x18.

The Doors of the Dwelling



Chantry, Beauchamp Chapel, Warwick.

Ancient Door of Solid Oak.

IN the earliest days, doors were only considered in their relation to the safety of the dwelling. Heavy doors of solid oak planking, three or four inches thick, thickly studded with iron spikes and reinforced by broad iron straps extending half way across the door from the hinges, defended the occupants of castle and hall from invasion by savage foes.

But conditions have vastly changed during centuries of civilization, and a man in armor with a raised battle-ax no longer waits behind those old oak doors with their black bosses and heavy hinges to receive attack—but instead, a maid in cap and apron presents a silver tray to receive the caller's card.

The esthetic qualities of doors are now considered by all architects of standing in planning a modern dwelling. Those ancient oak doors had a picturesque beauty of their own, and in truth often serve as a motif for the architect of today, freely modified and interpreted in the light of present requirements.

The form of the exterior door of the modern dwelling takes on many motifs. It may be Colonial or Georgian; it may be Craftsman, or it may be just plain "door," but that it should be emphatic, and the dominating feature of the exterior detail, is a *sine qua non* of design. Nothing will atone for an insignificant entrance or a cheap, snippy front door. One can forgive other faults in detail, but no amount of fancy work can overcome the damaging effect of an insignificant door.

Napoleon, when asked the secret of his success in battle, replied, "whip the enemy in detail"—a rule that will tell in many things, and in none more than in house building. Even the small house of today is complete in detail, and equipped with every kind of convenience and comfort. Nor is the esthetic element of the small house overlooked, but architects vie with each other in creating attractive small houses. Nothing makes more for this completeness of detail, than the doors of the house, be it large or small.

Take the bungalow type of dwelling, so omnipresent today. What importance the entrance door assumes in this type of design. It makes or mars it quite. The Craftsman door shown in illustration No. 2, fits in perfectly with its environment of rustic shakes.

This bungalow door is of unstained, simply oiled oak, but it does not have an unfinished look. The inner panels are painted dark reddish brown, like the red-brown shingles, and shows through the slits. The cross pieces are studded with black iron bolts, and black iron hinges and a black iron thumb latch have been used. Such a door, while so effective on the rustic bungalow, would not be at all in keeping with a finished house.

A Craftsman door that is well suited to the cement and concrete construction now so much in vogue, is shown in illustration No. 3.

There are as many types of Craftsman design almost as there are people, for it is a type full of subtle changes and variations, expressing strong personality. But could anything look more solid or substantial than the exterior door illustrated in No. 3? What a sense of security these sturdy oak panels convey. Hospitality too is indicated by its generous dimensions. Over such a door might be well placed the inscription over an old English manor house, "Through this wide-opening gate, none come too early—none arrive too late."

Many houses of the Craftsman type may appropriately be fitted with what is known as the Dutch door. This door is constructed in two sections—each swinging independent of the other. Or, the lower half may remain closed, while the upper is open for light and air. Many of the old shingle and stone houses of the early Dutch settlers in New York and Pennsylvania show excellent examples of



CRAFTSMAN DOOR FOR RUSTIC BUNGALOW



CRAFTSMAN DOOR SUITED TO CEMENT EXTERIOR.



THE DUTCH DOOR—ADAPTED TO A CRAFTSMAN EXTERIOR.

this type of door. The one illustrated is not unworthy of its prototype. It is best suited to the bungalow type of house and the windows to go with it should have small square panes and slide in their frames. Of course the Colonial type of house is well taken care of by the door man. The Colonial home builder always considered his door. If needs must, he could go without a carpet on his floor, but he lavished money on his doors. Also, he believed in doors, not yet being emancipated from the traditions of his English ancestry regarding privacy. And here we may remark to the builder of a Colonial house, that a Colonial interior with openings closed by portieres is an anachronism. Doors were frankly in evidence, and intended to be shut.

Every house builder desires a handsome, harmonious interior at the least expense. If the doors are common, old style, and poorly hung, no matter how handsome the furniture may be, the room will look cheap. The veneered hardwood door manufactured today enables the home builder to obtain this desirable, rich interior effect without greater expense. Practical builders and architects assure us that the veneered door is really a better door than the solid one. It has the richness of solid hardwood without its extreme weight, making it easier to hang and best of all—it will not warp. The construction of these hardwood doors as they are made today is a wonderful story —too intricate a process to describe in this article. Wonderful machinery has been devised for building up these doors which in no wise resemble the veneered doors which were glued up by hand 25 or 30 years ago. Heavy hydraulic presses make the door more substantial and solid than if it were one solid piece, and the direction of the grain being changed in each narrow strip prevents all warping or checking.

It must be admitted that well designed, well made doors are not cheap. Doors built to order from special drawings at the mill are expensive. There are, to be sure, what are called stock doors—made up cheaply from one pattern by the thousand, but they are neither economical or beautiful though they will answer in certain service portions of the house.

These doors are sure to warp after a few months, and what is more annoying than a door that springs away from its fastening. They are hard to hang true and they look cheap. The high class hardwood door now manufactured does none of these things; it does not warp; it hangs true and it is like a picture to look at.

Hardwood doors are now demanded by all classes of owners and renters as well. It is almost impossible in these days to sell a house that is not equipped with hardwood doors. Even if the rest of the inside trim be of fir or cypress, there must be oak or ash doors, and the trim is stained to match up as nearly as possible with the finish of the doors.

This enormous demand for hardwood doors has stimulated their manufacture to such a degree and developed the business on such an immense scale, that it is possible to buy high-grade hardwood doors at little more than the cost of the inferior soft wood doors when specially made. Some times the cost is even less. The writer of this article, when building a house recently, found it actually cheaper to use the handsome birch door of a well known firm for white enamel work inside, than far poorer pine ones made to order at the mill.

Illustration No. 5 shows the door selected in this instance. The same door was used in the rooms that were given a mahogany finish, and thus an effect of uniformity obtained most satisfying. Not only can the ordinary doors most in use be thus obtained, but French doors similar to the illustration—a style of door



INTERIOR DOOR OF BIRCH USED FOR WHITE ENAMEL FINISH.

which is being freely used in all sorts of houses, not only for opening into gardens and out upon terraces, but between rooms. The simple elegance of this door not only lends distinction to an interior in lieu of so many arched openings, but lets in light and reveals charming vistas, what in design and be in harmony at least with the entrance door.

We hear nowadays not only of concrete houses, but of concrete furniture and even doors, but we predict it will be many a day before people in general will consent to make jails of their in-



THE POPULAR FRENCH DOOR.

while permitting a closed effect when desirable.

Even an old house may have its character completely changed by the simple expedient of changing the style of the doors and windows. It is true that a new front door may involve new inside ones as well, for these should conform someteriors. Who could give up these beautiful doors, the beauty of the forest's heart fixed in these rich panels that are soft as velvet when properly stained and finished. The beauty of these doors is not half revealed by the illustrations, and is only equaled by the staunchness and perfection of their construction.

NOTE:—We are indebted to Morgan Co. for some of the door illustrations.



THE OLD HOUSE.

The Remodeled House

IT was just an old house, to begin with, two story and attic, with a one-story kitchen projecting at one end, and a shed attached at the back. Outwardly it was a solid-looking, proper enough affair, without any particular distinction. Within, two good fireplaces with simple mantels, some wainscoting of the old-fashioned wide boards, and a rigidly plain staircase with small landings were the only details that one could take an interest in. Soundness of frame was well enough guaranteed by the fact that the house was built in 1801, a time when builders had not learned the trick of making large timbers, or doing without them, by means of a combination of little sticks and nails.

Here, then, was the material to work with. How should a good result be secured without the cost of building a practically new house? Here was good material in a sound frame, and there were charming views to be made available. How?

The first thing to do was to get windows on the back of the house, and to make those windows serve rooms which would be in frequent use by the family. To this end the space occupied by the shed was turned into a sewing-room. Then an addition was put on from about midway of the sewing-room to the line of the chimney in the parlor, the rear wall of the original little bed room and part of the parlor was removed, and presto! here was a fine space for a library, with two windows opening on the views, and a door leading to a broad piazza. The new library gave passage by a door to the dining room and sewing room, and by a broad, open space to the living room.

In the old parlor two closets had filled up the space on each side of the fireplace. One of these closets was done away with in making the opening into

the library. The other closet was torn out, a window put in the outer wall space it had obstructed, and a window seat built in below,—still another chance at the pretty view on the east. The dining room was considerably changed by two alterations in its shape and size. The first change was cutting off the two rear corners by oblique walls, one of these containing the doorway which led into the library, and the other giving entrance to, and helping to furnish space for, the china closet which was interposed between the dining-room and the kitchen. On the southeast side of the room the old single window was displaced by a half-octagonal plant bay, which let in much more of the morning sun, and added the decorative effect of the plants themselves.

The kitchen was also remodeled. The main change in the kitchen was the addition of about four feet to its length. This additional space provided for a fairly roomy vestibule in the east corner, where the refrigerator was placed at the north of the new back door, under a window looking to the northeast. The other part of the added space served to lengthen the southern side of the kitchen, and this was provided with a new window looking east. A little study of the revised plan will show how greatly the convenience as well as the comeliness of this end of the house were increased by the added kitchen space and its better arrangement.

Two other considerable changes in the body of the old house were the enlargement of the cellar and the addition of dormer windows. The first of these changes was made necessary by the greater space demanded by a modern central heating plant. Naturally the builder of the old house was not wise in the complications of furnaces and steam heaters, and the cellar which contented him was only about half large enough for the requirements of today. The addition of dormer windows was necessary to make the attic chambers comfortable in summer weather, and it produced, in addition, a rather pleasing change in the external aspect of the building.



THE OLD HOUSE REMODELED.

The Newcomb Art Pottery

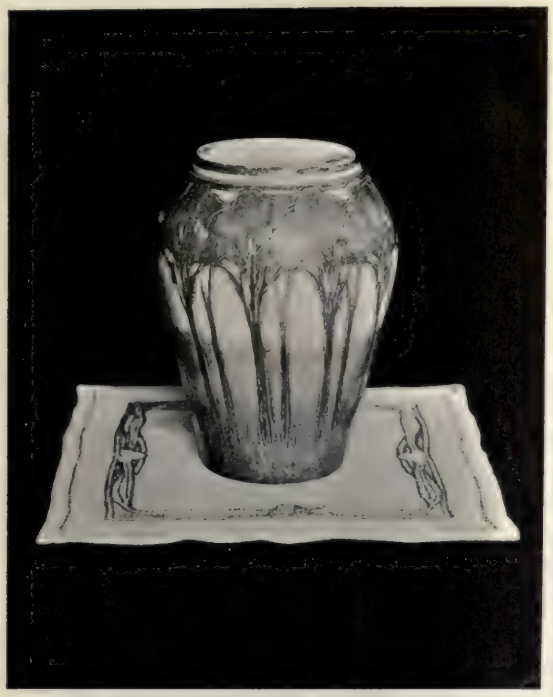
By LUCY WATSON KIRK

A QUARTER of a century ago Old World critics were skeptically asking, "Has America produced anything original in art?" The question today can be answered in the affirmative, and by various handicrafts, but possibly there is none more interesting than pottery; yet the manner of making pottery has not advanced since the days of Pharaoh, and the same style of wheel is still used for the finest work.



The Newcomb pottery is an achievement of art handicraft of a very high order.

It is fascinating beyond description to watch the shaping of a graceful vase from the shapeless lump of clay. The potter picks up a piece of moist clay about the size of a coffee cup, and kneads it for several moments on a metal-top stand till, of the proper consistency, which means devoid of air and bubbles. It is then carefully centered on the horizontal "potter's wheel," the wheel put in motion, and the interesting process of making the vase is begun. With deft fingers the potter draws the lump of clay into a cone, but almost before you decide it is a cone, with a touch of thumb and finger it becomes a bowl. Then a compelling forefinger down the inside makes it grow taller and narrower. The potter is skilled and accurate, having a firm but delicate touch, and with a pinch here and a pressure there, with fingers first on the inside and then on the outside follows the design. Occasionally pressing the cutting with a sharp tool, and throwing off the waste, at length it assumes the shape desired, and the potter caressingly puts on the finishing touches. If for purely commercial work, the vase will be put onto another wheel for measurement—a wheel revolving below a set of knives adjusted to the shape of the piece, so that it shall be perfectly symmetrical, the knives cutting away any excess of clay. Parts which cannot be formed on the wheel, such as handles, spouts and knobs, are fashioned by hand, and added while soft, and irregular shaped designs are made in molds. These molds are of plaster of Paris, into which the liquid clay is poured, and the

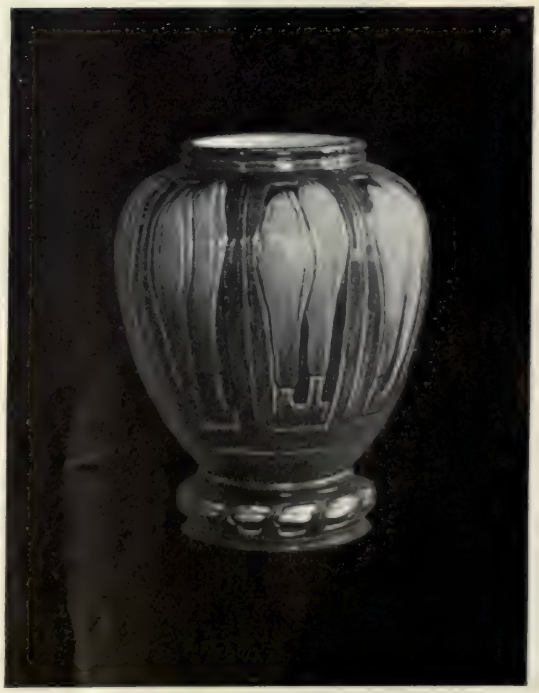


A vase of beautiful design.

mold then put in the drying room. As the mold absorbs the moisture, the clay is left the desired shape, though the curled edges are made by hand after leaving the mold. The molds are kept in the dry room for several days to thoroughly dry. After the vase, whether molded or shaped by hand, has been measured, it is put into an air-tight, moist room till needed by the decorator.

In the kilns are electrical barometers to register the degree of heat, though sometimes the heat is determined by "settle" pieces, put where they can be seen without opening the kiln. These "settle" pieces are tiny strips of clay set upright, and when heated to a certain degree they turn over. Crude oil is mostly used for heating the kilns, and the pottery rests in white sand in "saggars," which look as though they might be bonnet boxes from Pompeii. As many as possible without touching are put into the saggar; each saggar is sealed, the kiln filled with saggars, and the kiln then sealed.

For the first, or "biscuit," fire two thousand degrees of heat are sometimes required. After this firing, each piece is carefully sandpapered that the slightest flaw may not be left to mar the evenness of the glaze. The effects of color after this firing are beautiful, and but for the fact that dust would in time spoil the beauty, many of the pieces without the glaze would be chosen, though totally unlike the glazed pieces. Each piece is dipped in a tub of glaze, which looks like a thin paint, but lacking luster, and soon drying, covers the vase, obscuring all decoration. After dipping, the pieces are put into a cold, moist room till a sufficient number are ready to fill the kiln. Then each piece is set on tripods in the saggars, which are sealed as for the first firing, and the glaze firing given. This is the time of greatest interest as well as



The reducing flame employed with success, gives a deep, impressive red.



A hand-carved frame.

peril, for the glaze may not vitrify properly, or a fire crack may ruin the whole. The fused glaze sometimes produces astonishing modifications of color, and qualities absolutely unknown are developed in the clay.

The characteristic color is a bluish green with occasional touches of yellow. These color tones and their variations make this pottery an excellent choice for decorative purposes in the home, as it is in harmony with almost any color scheme except reds and browns. With blue and green color schemes it is ideal, and charming with yellow or grey.

The exquisite lines of the pieces illustrated speak for themselves, as well as the decorative designs for embellishment.



A Newcomb loving mug.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after all the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

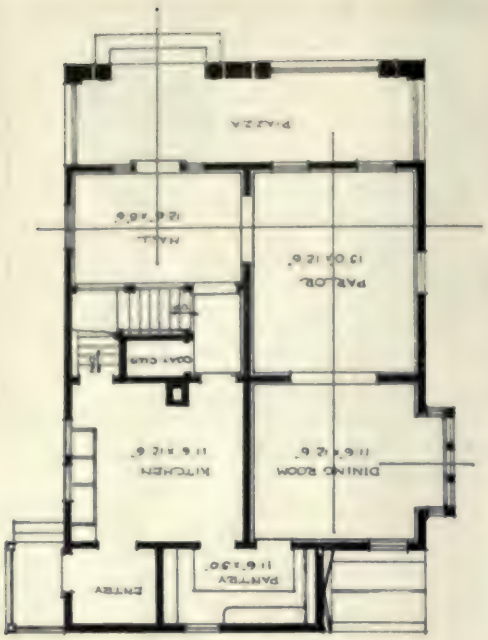


A Good House Built on a Narrow Lot

By ARTHUR E. MARR

TO the man of unlimited means the problem of house-building is an easy matter, but it is the individual who finds it necessary to consider cost and saving, the man with the average income, who, because of these things, finds home-construction a problem which requires careful thought and judicious planning. And especially is this the case with the person whose work is in the city and yet who wishes the rest and relaxation that a home in the suburbs brings.

At the present day transportation facilities for the public are especially good, but this fact also acts on real estate values



First Floor Plan.

and the usual building lot generally is restricted in area and of narrow frontage. It is with this particular condition this present article deals, and this type of house has been chosen to illustrate aptly what has and can be done on a small lot and at a low cost. The plan is practical, as use has shown, design attractive, and the interior both comfortable and well arranged. The construction is thoroughly sound and the cost remarkably low. The keynote to the model is room, unusually good room space for house size and cost, and an abundance of light and air.

The frame, covering a ground space of about twenty-six by forty feet, is of two and a half stories, of wood, and with the metal lath. The balance is finished with shingles, the sides being broken up, and the entire height apparently reduced by a double layer of shingles being used every three or four layers. This same height reduction is further enhanced by dormer windows and also by the second story projecting out and overhanging the lower floor. These two features give much more space, and the dormer, better light and air. This latter, the dormer, also serves to break up an otherwise rather plain roof slope.

The piazza extends across the entire front and is about seven feet deep. The effect of the three large square plaster posts at this point is pleasing, seeming well to sustain the story and a half above, and gives an air of stability to the entire structure.

The front entrance is on the right of house, so as to give a larger living-room, and is flanked with two long panel-leaded glass windows. These afford sufficient light and have a simple attractiveness.

The first floor contains reception hall, three rooms and a pantry. The hall which really serves as a reception room, is twelve feet six inches by eight feet six inches, and is finished in white wood painted white.

The living room is entered through a



Second Floor Plan.

large double doorway, and this room, which is fifteen feet by twelve feet six inches, is finished in white wood painted a dead white. Two windows on the front give light, and a small stained leaded glass window on the side gives tone. The dining room is directly back of this room and connected by means of a double doorway. This room is twelve feet six inches by eleven feet six inches, is finished in North Carolina pine stained a deep green, and rubbed down with wax to a satin finish. It is supplied with plate-rail and papered with a soft green two-tone striped cartridge paper. The border above the platerail is plain green. The room is lighted with a large bay as well as by another window at the end.

The approach to the kitchen is through a large pantry, which is well supplied with shelves, cupboards and drawers, and has a window admitting plenty of light and air.

The kitchen is twelve feet six inches by eleven feet six inches and is finished with hard pine, varnished. The walls are painted plaster. This room has soapstone sink and the usual kitchen fixtures and is lighted by two windows. The rear vestibule is large enough to serve as an overflow room where various kitchen things may be stored, it also contains the refrigerator and is piped for the ice water outlet.

The coat closet is located by the staircase, which is a system of square angles, to save space, and these stairs can be reached from either the hall or the kitchen. Both these approaches are provided with doors.

The second floor contains four very good chambers and bath, and it is this floor which is especially noteworthy. The two front chambers are, one, twelve feet ten inches by twelve feet six inches, and the other, twelve feet six inches by twelve feet, and, in addition, both these rooms have an alcove measuring about five by eight feet, this space being formed by the dormer windows. The finish in these two rooms is whitewood painted white and rubbed down. They are papered with simple bed room paper, contain ample closet space and have two windows each. This entire story has floors of rift hard pine.

The other two chambers are, one, twelve feet six inches by eleven feet six inches, and the remaining one, twelve feet six inches by ten feet two inches. These rooms have the same finish as the preceding ones, as well as the same window space and closet room, one of them, the smaller one, being especially well favored with a large clothes room.

The bath room has enameled iron tub and lavatory, nickeled pipes and fixtures, and is finished in North Carolina stained pine.

The attic contains a large maid's room which is finished with hard pine. The balance of this floor is devoted to storage space. The floors throughout this attic are hard pine, the same as the rest of the house. The cellar has a cement floor, contains the laundry and is equipped with furnace, and the whole structure well built and conveniently arranged.

The Cost.

Excavation and foundation	$450.00
Carpentering	2,140.00
Plastering	300.00
Heating	150.00
Plumbing	300.00
Electric and gas piping	60.00
Electric fixtures	50.00
Paper	50.00
Cost of house	$3,500.00
Architect's commission 10%	350.00
Total cost	$3,850.00

Construction Details of the Home

Painting, Staining and Finishing

External and Internal Effects, Treatment of Finish, Walls and Floors.

The Exterior.

COLOR treatment depends entirely upon the architectural style, the materials employed, and environment.

The Wooden House.

Stained shingles and painted siding is often used in small houses with trimmings of a light color. Good color combinations are made with two shades of brown for shingle and siding, the upper shingled portions receiving the darker tone, roof shingles of moss green stain and trimmings of ivory white paint including sash. Or, the ivory white trim may be used, with dark green for shingles and siding of the body, and a gray or brown stained roof.

Where the foundation of the house is of gray stone or brick with the same general tone on porch floors, a good combination is a rich, dark red for walls, dark moss green for the roof stain, with dark green trim. The combinations we suggested are especially appropriate for the bungalow or cottage.

For the more symmetrical house, or those of Colonial motives, lighter colors are necessary and may be pure or ivory white, Colonial yellow, light or ash gray. The white is often used very effectively for trimmings, with either of the latter for body coats.

Outside shutters or blinds are suitable to this type and should be painted a rich leaf green like the surrounding trees or white like the trim.

A well kept lawn and green trees form an appropriate setting for such a house and color scheme.

Brick or Cement With Wood Trim.

Red brick or cement stucco is now very popular, used with half-timbers in upper stories, with stucco panels between.

Moss green or dim weathered gray or brown makes a pleasing contrast with the natural gray of some cements. If the cement is of a dark muddy color it can be painted with specially prepared paint which can be had in a variety of tints. Entire stucco exterior can be so treated with trimmings in stain or paint.

Application of Exterior Paint.

For good results use enough pure raw linseed oil, on new or very old surfaces, in the first and second coats to properly fill the wood, and prevent absorption of oil and binder from the paint film, and still leave enough oil to bind the pigment thoroughly.

If new surfaces are hard and resinous add a liberal percentage of pure spirits of turpentine to first and second coats to insure adequate penetration and assist the drying to a proper surface for recoating.

Use equal parts of pure spirits of turpentine and pure raw linseed oil for the hard surface of old painted work, thinning the first coat to ensure penetration and homogeneous drying of the new coat of paint.

Paint should be spread out in thin coats and brushed well into the pores of the wood.

A 5-0 or 6-0 round or oval brush is bet-

ter than a flat wall brush. A new house should contain no wet plaster or basement when it is painted. If siding absorbs moisture the paint will blister or peal. Avoid heavy frost, fog or dew. It is not good to paint in the direct heat of summer sun. Keep in the shade as much as possible. Fresh mortar beds will destroy the life in oil because of moisture and fumes which the oil absorbs if paint is used near them.

One coat should follow another before it gets too hard to have the proper "tooth" necessary to give the next coat the proper grip upon it.

Leaky gutters and down-spouts often cause paint to blister and peel.

When the final coats are to be of lead and zinc colors, yellow ochre and mineral reds, such as venetian, iron ore, and other oxides, as well as Prince's mineral, etc., should not be used as primers, because when mixed dry, do not combine readily with linseed oil. Unless ground, certain particles are not thoroughly saturated and upon being applied to the surface absorbs oil leaving the film of orchre or oxide, without any binder, resulting in peeling and perishing.

On account of the difficulty of spreading these pigments they are often applied in a very thick coat, which if allowed to become perfectly hard forms an impervious surface, preventing the proper adhesion of subsequent coats of paint.

Exterior Varnish Finish.

Only the best grade of varnish, specially manufactured for outside work should be used as the constant dampness will affect an inferior material seriously. The stains for exterior doors should be non-fading and the varnish must form a thoroughly impervious coat. It is best to use only goods of some well known manufacture according to directions.

Shingle Stains.

These stains not only preserve the wood, but produce beautiful effects in the many colors in which they are manufactured. Samples are usually obtainable from manufacturer's agents.

Stain should be thoroughly mixed before using. When delivered in a keg, the head should be removed that the contents may be mixed with a paddle. Some painters try to accomplish this with a lath through the bunghole and it is always unsatisfactory because the pigment is not well incorporated with the liquid, resulting in a loss of color and strength. It is better to employ a thoroughly practical man who will do things right rather than the easiest way, even if it costs more.

Woods For Interior Finish.

Finishing woods should be in harmony with the thought and tradition of the rooms in which they are used. The use and contained furniture of the room are deciding factors. In like manner the finish that is put upon it should be in harmony with the contents. Some woods are best adapted to stain, others to paint, and white enamel and some can be treated with either. The effect produced in one wood by a given stain is not necessarily similar in another wood. Special treatment is required in each case.

The woods most in use are oak, mahogany, birch, walnut, maple, southern pine, white pine, white wood, fir, cypress and some redwood.

Among other woods may be mentioned, chestnut, ash, cherry, gum, sycamore, and spruce, but those preceding are most in evidence.

Oak.

White and red oaks are used for interior woodwork, furniture and floors and is either straight or quarter-sawed, the latter bringing out the beautiful flaky effects so familiar to all.

Oak is open grained and when a rubbed or polished surface is required must first be filled and then receive the various coats of varnish.

When a mission or wax finish is wanted, no filler is used. For a natural finish a transparent filler is used without stain. Oak stained finishes are known as fumed oak. (a rich brown, light in tone), Old English oak (a medium tone of rich brown), cathedral oak (a dark reddish brown), early English oak (weathered brown in medium tones), and silver gray (light silvery effect). Any of the above methods may be used for finishing these stains.

Owing to the presence of gallic acid in oak woods the stain used should be scientifically manufactured to resist it.

Mahogany.

Mahogany is used sparingly for finish and sometimes in combination with painted or enameled wood as for hand rails of stairs with white enameled balusters. Both straight grained and crotch mahogany is used, the latter as a veneer on account of its high price. Mahogany takes a high polish or may be very attractive when the varnish is rubbed down to a dull finish. It is open grained and requires a paste filler. The beauty of its grain is unsurpassed and the wood is of a rich brown color. Special stains are made light, medium and dark and each can be reduced if desired.

Birch.

This is a very popular wood of light reddish brown color and close grain which requires no filling. It is finished natural or may be stained walnut, cherry or mahogany. No better surface is known for white enamel. It is less expensive than oak and makes a good floor.

Walnut.

This heavy, tough, beautiful, open grained wood requires filling. Its color varies from light to dark brown and is used mostly for furniture, but is getting very scarce.

Circassian walnut is different from the common black walnut and has beautiful streaks of brown and black in the grain. It makes a handsome room but the furnture should be of the same wood. Gum wood is stained in imitation.

Maple.

This wood is fine grained and of compact texture. Its fiber is sometimes distorted producing "bird's-eye," "blister," and "curley" effects. No filling is required and it is usually finished natural but good effects can be had in mahogany, cherry and silver gray. Floors of maple finished with good floor varnish are very durable.

Southern Pine.

The close, strongly marked grain of this wood does not require filling and is heavy, hard, strong and durable. It is much used for interior trim and shades of brown or silver gray stains are very effective. The mission finish adds much to these stains. A first coat of shellac should be applied when the wood is full of pitch. While it may be used for white enamel, birch, whitewood or poplar will give better results.

White Pine.

This might be called the most common of our woods. It is soft, light, straight grained and does not require filling. Light yellowish white in color it is usually finished white but takes any stain readily and its beauty is surprising to one accustomed to associate it always with paint. White enamel may be placed upon it to advantage.

Whitewood, Poplar and Cottonwood.

These woods have similar characteristics and are used for interior woodwork. White wood is suitable for carving, but the chief use of these woods is for white enamel work.

Fir.

This wood has a close grain which does not require filling and takes stain beautifully. It resembles spruce and pine in appearance and structural qualities and

is largely used for interior work. The markings or slashes of the grain range from very fine to very coarse or may be had perfectly fine and straight. The light and dark portions are in beautiful contrast and harmony and is best with a dull finish or wax. The wood should be thoroughly kiln dried, pitch pockets removed and any remaining pitch "killed" in the finishing, as it is likely to appear later upon the surface of the finish if not thus treated. For flooring it is extensively used both inside and out.

Cypress.

This is a very durable wood and while it has always been used outside has come into use for inside finish on account of the many beautiful stains which bring out the different variations of the grain.

Browns, such as Cathedral, Old English, Weathered and Fumed are very satisfactory. The grain is close and requires no filling.

Redwood.

A native of California, the tree is noted for its enormous size. Its color is reddish brown, it is of light weight and its grain is close requiring no filling. Curley redwood is occasionally distortious of the grain and is used in costly interior decoration. Finished natural it is very beautiful, but is also well suited to stain. The wood should be thoroughly kiln dried for interior work. Externally it is much used for shingles.

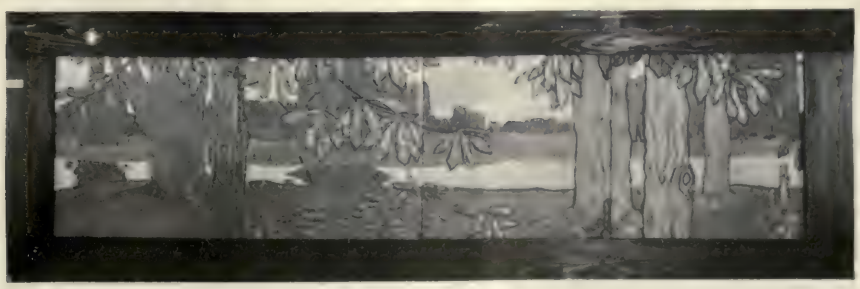
Painted Walls and Ceilings.

Flat toned paints are now extensively used upon interior plastered walls and ceilings for the very best work. The surface may be rough or smooth and a great variety of soft beautiful tints are obtainable. Stencilling is very much in vogue and appropriate stencils are kept in stock for rooms of any character. Soap and water may be used freely upon surfaces so treated.

Selection and Use of Materials.

No materials for painting or finishing should be used other than those of a reputable manufacturer. Such goods have the guarantee of quality, are accompanied by specifications or to their application and finished samples will be furnished by request to the manufacturer. If used according to directions manufacturers will stand back of their product and will furnish advice to cover the special requirements of the purchaser. These are good reasons for using only goods of standard makes.

In letting a contract see that all things are included if possible. The bath tub is often forgotten in the painting contract and the plumber leaves it with the coat of red lead upon it just as it came from the wholesale house. It is unsightly and must be painted, but the plumber says it is painted and the painter says it is not in his contract. As an extra it costs more money than if put in the original painting contract.



Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 321 GLEN L. SAXTON, Minneapolis, Minn.
B 322 JOHN HENRY NEWSON, Cleveland, Ohio.
B 323 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 324 GEO. M. KAUFFMAN, Cleveland, Ohio.
B 325 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 326 KEITH'S ARCHITECTURAL SERVICE, M'p'l's.

B 321.



OUR opening study for March is a good example of the modern type of story-and-a-half bungalow designed by Glenn L. Saxton.

The exterior is of siding painted a chocolate brown with ivory white trimmings, shingles a moss green and the chimney a red sand mould brick or "rough cast" cement plaster could be substituted at an additional cost of about $100.

The living room extends the entire length of the house with an open fireplace in the end. The combination stairway leading from the living room and kitchen to a landing with basement stairs beneath.

The dining room would appeal to the most critical. The two china closets at each side of the sideboard, beam ceiling and paneled burlap walls up to the plate rail, make it complete in every respect.

In the second story are three good sized chambers, all full height, with ample closet space. A linen closet, medicine cabinet and clothes chute go to make the plan complete in every respect.

There is a full basement with vegetable cellar, laundry, furnace room, etc. Hardwood floors throughout with oak or birch finish on the first floor and white enamel for the bed rooms.

Size is 26x28 feet over the main part. Cost, exclusive of heating and plumbing, $3,250.

B 322.

At a glance at the exterior one thinks this a duplex but it is "an extreme colonial type" of a home that appeals to many who admire a plain and stately exterior.

The same severe colonial lines of the exterior are carried out in the interior as well. The house is not as large as one would think from the exterior.

The living room and dining room have beam ceiling with an open fireplace in the living room.

There are four chambers with bath on the second floor with a closet for each chamber.

Full basement with heating plant and laundry.

Hardwood floors throughout with pine to paint for the finish. Size 26x32 feet.

This house was designed by John Henry Newson and is estimated to cost $4,000 complete, including heating and plumbing.

B 323.

A simple colonial type of a house designed by Arthur C. Clausen, architect. With its massive front porch columns extending up to the second story. The living porch, however, being on the side and connected to the library by a pair of French windows.

The rooms are all large and, being well connected by columned openings, give a spacious and roomy appearance as one enters in the main hall. The large bay in front with open fireplace

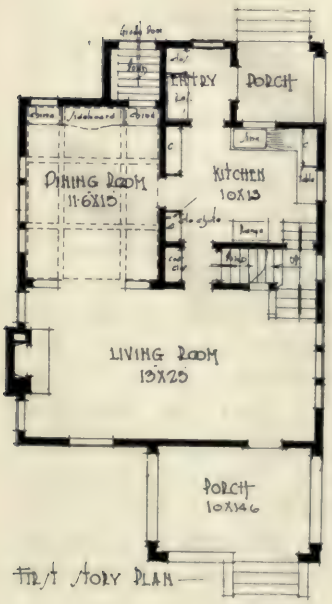


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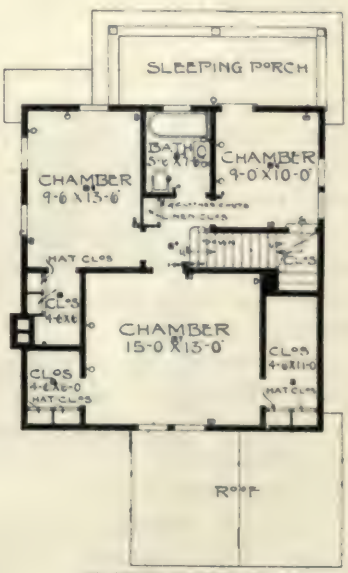
—Glen L. Saxton, Architect.

A Story and a Half Bungalow

DESIGN B 321



First Story Plan



Second Story Plan

in living room makes an ideal room.

The sink with drain boards on each side across the entire end of kitchen is very desirable. The pantry is well equipped with cupboards and work table with bins and drawers under.

On the second floor are four good chambers and a small sewing room, all provided with a closet. There is a good closet off hall and one off bath that can be used for linen. Full basement with hot water heat, laundry, etc.

Hardwood floors throughout with hardwood finish down stairs; balance in pine to paint. Size 32x44 feet.

Estimated cost to build, including heating and plumbing, $6,300.

B 324.

In this design by George M. Kauffman, we have an attractive exterior in cement plaster with a red roof. The design is well adapted to a high lot and would make an ideal suburban home where plenty of ground or garden space was available. The portion of the front terrace is covered giving the necessary protection to the front door, the large veranda being on the side and at the rear with French doors leading onto same from both the living room and dining room.

This porch may be screened in summer and glazed in winter, making an ideal living porch the year around. The rooms are all good sized, the living room and library both containing an open fireplace with built-in book cases in the library. The dining room has a china closet on each side with space for a buffet in the center.

The second floor contains a sitting room with open fireplace or may be used for bed room. Besides this there are four bed rooms with a large linen room and two bath rooms.

There is a large closet for each bed room. Full basement with hot water heat, laundry, etc., also a good attic.

Hardwood floors throughout with hardwood finish down stairs in the main rooms.

Birch or pine for white enameling up stairs. The size is 56x35 feet.

Estimated cost complete, including heating and plumbing, $10,000.

B 325.

In this design, by Chas. S. Sedwick, we have a "cement half timber" bungalow. The plans call for a good sized living room, dining room, kitchen, two bed rooms and bath on the first floor and space enough on the second floor for finishing off two more bed rooms if desired. There is a small rear porch with place for an ice box. Sideboard in the dining room; cupboard in the kitchen.

The plans call for Washington fir floors and finish, stained brown or a dark mission to good effect.

The fireplace is of vitrified or sewer brick with deep joints. The outside walls are to be tinted, with shingles stained red. Basement under main part of the house. Furnace heat.

The size is 41.6x24 feet, and it is estimated that this bungalow can be built, exclusive of heating and plumbing, without finishing the second floor, for $2,500.

B 326

A very attractive colonial design. The first story of clapboards, painted white, with shingles in the gables stained a brown and roof shingles green, makes a good color scheme for this design.

The living room is large with a bay in front and an inglenook directly opposite, with open fireplace, with book cases and seats on each side.

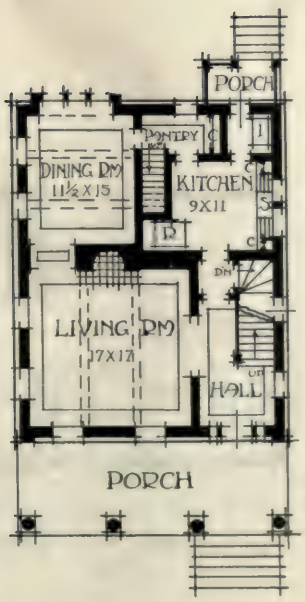
On the second floor are four good sized chambers with bath, all rooms being full height. There is full basement with furnace room and laundry. Hardwoods floors throughout. The finish of the main rooms is oak or birch, balance pine to paint.

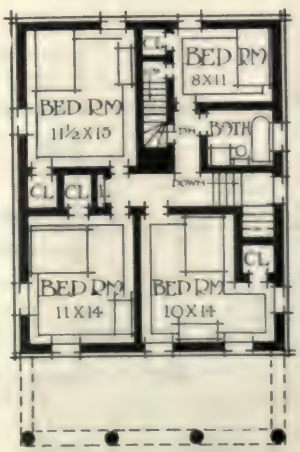


—John Henry Newson, Architect.

A Dignified Colonial House

DESIGN B 322



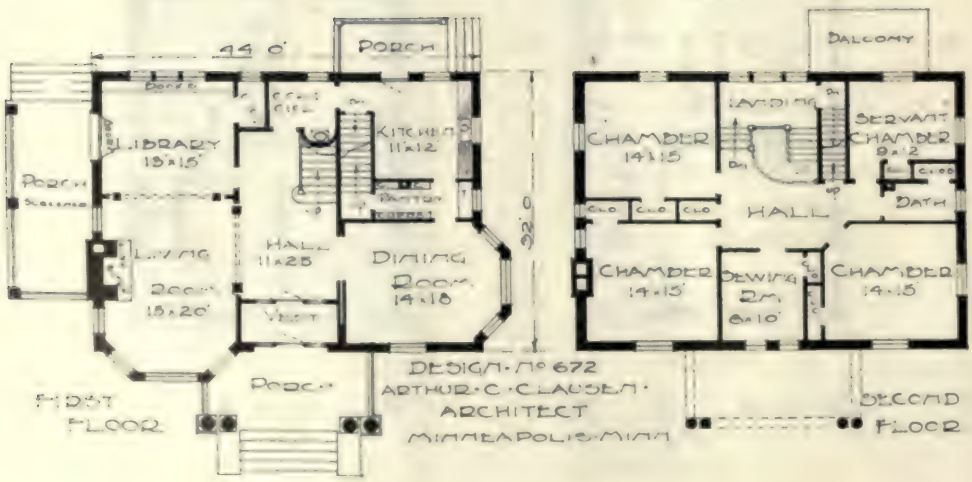




—Arthur C. Clausen, Architect.

A Simple Colonial Design

DESIGN B 323

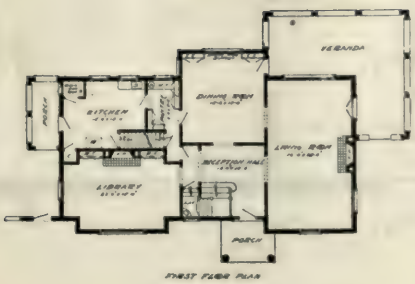


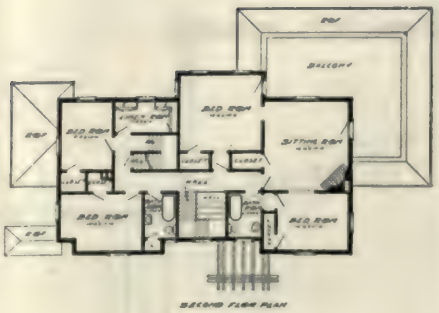


—Geo. M. Kauffman, Architect.

A Study in Cement Plaster

DESIGN B 324



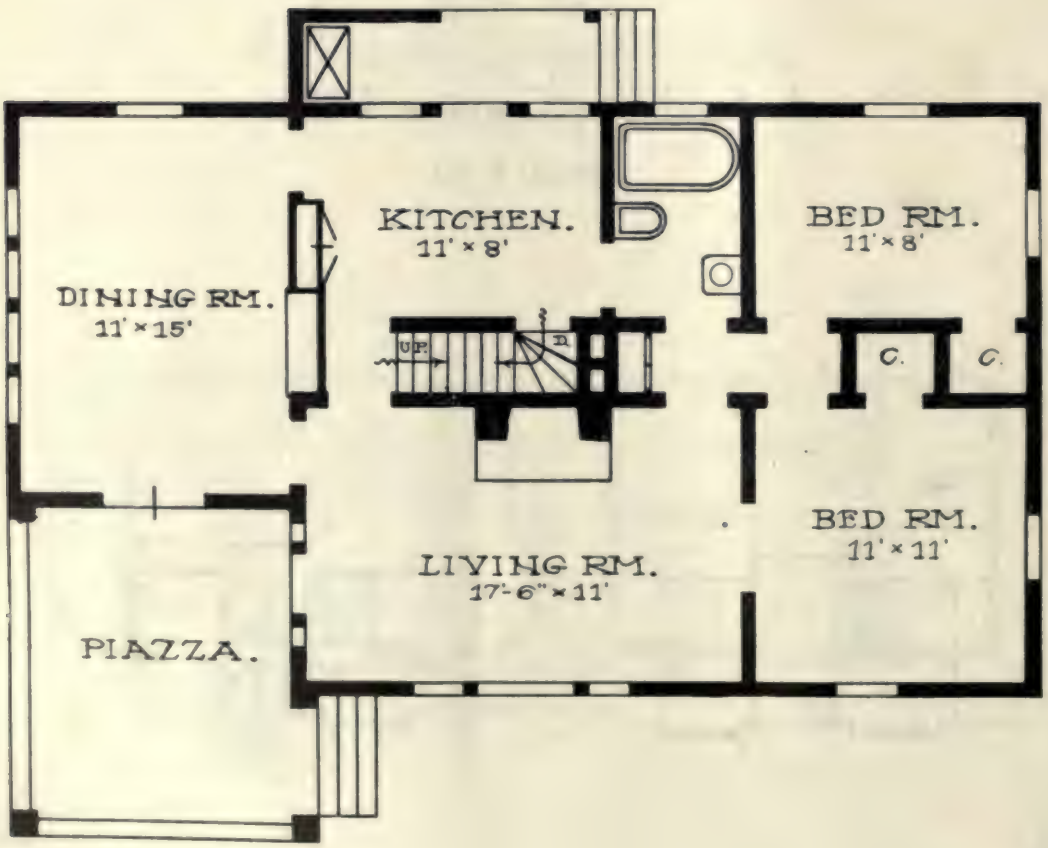




—Chas. S. Sedgwick, Architect.

Half-Timbered Bungalow

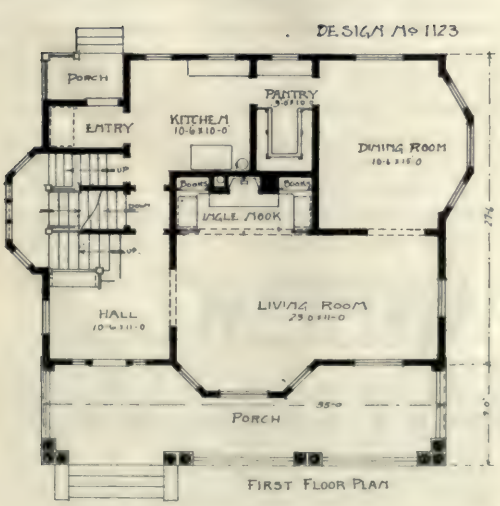
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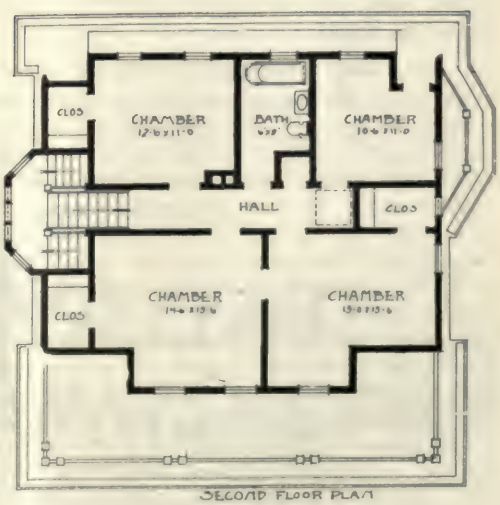




An Attractive Design for a Gambrel Roof

DESIGN B 326







Conducted by ELEANOR ALLISON CUMMINS, Decorator, Brooklyn, N. Y.

The Arrangement of Rooms.

YOU may have the most beautiful and artistic furniture possible, an absolutely good color scheme, just the right pictures and bric-a-brac, and yet your room may be very unsatisfactory. In such case the arrangement is at fault.

When we first emerged from the darkness of the black haircloth and marble-topped table period, some thirty years ago, we reacted to the opposite extreme. Because the arrangement of rooms had been absolutely rectangular and symmetrical, we jumped at the conclusion that the way of safety lay in higgledy-piggledy. Any angle was admirable so long as it was not a right angle. It was the day of the apotheosis of the broken line. But we have emerged gradually from this state. We are content to set our chairs and couches against a wall, instead of across corners, and we understand that a certain formality of arrangement is demanded by some styles of furniture. Why then, do we so often fail of a harmonious result?

The Value of Balance.

A good many rooms fail to please because the groups of furniture do not balance each other. Suppose a massive chimney piece, with deep recesses on either side. If one of these recesses is occupied by a high bookcase in dark wood, and the other by a low couch with a light colored covering, with delicate water colors hanging above it, the effect is extremely bad. It would be better to place the bookcase elsewhere, as its lines are almost certain to conflict with those of the chimneypiece, but if it must remain either a corresponding piece of furniture, another bookcase or a high cabinet, should occupy the other recess, or the couch be covered with a dark material, and the wall hung with pictures, deep in tone and heavily framed.

This same principle of balance applies to the hanging of pictures. If part of a large wall space is covered by a single, large picture, heavily framed, it should be flanked by a group of smaller pictures, closely set together, and of the same general depth of tone. You cannot balance a mirror with anything but another mirror, therefore a mirror should either occupy a single wall space, which it nearly or entirely covers, or else the center of a large space, with balancing groups of pictures, light in effect on either side.

The Dominant Line.

The ideal room is very nearly square, but the average room is oblong, and in the city house is apt to be exaggeratedly so. The object in arranging the furniture in such a room is to counteract the effect of the predominating long lines. This is best achieved by breaking the room into two sections, which is most easily done by setting a couch at right angles to the fireplace, and treating the two spaces thus formed as separate rooms. Only in this way is it possible to break the long lines of the room by placing pieces of furniture at an angle with them. Otherwise they must follow the length of the room, and the exaggeration of that dimension is more noticeable.

The Arrangement of the Very Large Room.

This room of extreme size is apt to be a library, in which the need of accommodating very many books has compelled the use of extraordinary dimensions. A room thirty-five feet square is difficult to furnish so as to avoid a bare look. The initial difficulty is finding a rug that



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FLOOR—S-W Floor-lac light oak

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makes any sort of appearance on such an expanse of floor. The Oriental rugs to be had in such large sizes are nearly all of the most expensive sorts, and even they leave a preposterously wide margin. The writer's own solution of the difficulty would be a made rug of Wilton, or Axminster, in two tones of brown or green, almost covering the floor, with smaller Oriental rugs at fireplace and doors.

Naturally, in such a library, the writing table is the central feature, occupying the middle of the room, but it too, however large, is often dwarfed by the expanse of space about it. A davenport, or other large couch, standing facing the fireplace, with its back to the length of the table, is pleasantly placed for use, and also remedies the disproportion between the centre and its surroundings. A revolving bookcase added to the group will help.

Making Much of Fireplace and Windows.

The apparent size of these very large rooms is helped by making the chimney piece project well into the room, making deep recesses at either side. The capacity of the library can be considerably increased in this way, as bookcases can be carried along the ends of the chimney breast. The projecting chimney piece will give an opportunity for the construction of convenient presses for clothes in the bedroom over head.

The windows may also be pressed into the service, and bookcases be carried along the wall below them. One window space may well be occupied by a projecting case of some sort for prints or music, whose top will serve as a resting place for a dictionary or other book of reference.

The use of cases projecting at right angles from the walls of the room, so common in public libraries, might well be adopted, when a large collection of books is to be housed. It gives a room a very distinctive character, and a good many thousand volumes can be quartered in an apartment of moderate size. The objection which used to obtain that it was almost impossible to read the titles of books in the farther ends of the alcoves is obviated by the very general use of electricity, as a single bulb can be placed in each alcove.

The Sideboard for the Small Dining Room.

Unless one is fortunate enough to live in a house which has built-in cupboards in the dining room, a sideboard seems almost a necessity, yet almost all of those of the best styles are very large, and when placed in a room not more than ten or twelve feet square are overpowering.

This being the case, it is well to substitute for the sideboard what is known to the trade as a buffet, a compromise between a serving table and a sideboard. These come in dull finished mahogany and in the highly polished wood, also in various tones of oak. They differ principally from a sideboard in not having much of anything in the way of a back, merely a slight elevation to distinguish them from a table. They have also the advantage of costing much less than a sideboard, and with one of them and a plate rack, if one is fancied, there is ample accommodation for all the china and silver that ought to be displayed. Too many people make the mistake of overcrowding the dining room with silver, glass and china. A few good pieces tell, the rest are best left in the china closet, until needed for actual use. Cut glass, which is charming on the white-covered, flower-decked and candle-lit dinner table, is seldom effective as a part of the ornamentation of the room. When it is kept in a mirror lined and glass shelved china closet, the effect is to say the least glacial.

Some Points About Jacobean Furniture.

And speaking of Jacobean furniture for the dining room, it is well to realize that it belongs to a period when porcelain was, if used at all, unusual in England, and that it harmonizes better with silver and pewter, and with the older French and Italian wares than with delicate modern china. The Cantigalli and Ginori potteries of modern Italy send out many reproductions of old designs in vases and candlesticks, which are admirably adapted for the decoration of the chimneypieces of the Jacobean dining





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room. There are also French wares of similar style, equally effective, but different in coloring from the blues and yellows of the Italian kilns.

Another point to be considered in buying Jacobean furniture is the height of the chair backs, also the tone of the canework. There are two styles of chairs. One has a carved framework to the back, surrounding a narrow panel of fine cane work. The other has a back almost entirely of canework, with a narrow frame, grooved at the edge. Both styles have backs which to modern eyes seem disproportionately high, and this disproportion is one of the distinctive marks of the style.

The canework of a good reproduction is never yellow, but is of a grayish brown tone, rather lighter than the woodwork. It is also of a much finer weave than the ordinary cane work used for chair seats. These may seem to be minor points, but looking out for them in the beginning may save later discontent.

Library Furniture in Leather.

The leather covered chairs and couches for library use are rather smaller than they have been for some time past. Backs are lower and seats not quite so deep and the pieces are plainly covered, with welted edges. A good deal of roan Spanish leather, or its imitation, is used, and there is a very good shade of green, rather brighter than olive. Some of the couches show the loose seat cushions which are a feature in much of the newer upholstery.

Something About Lampshades.

It ought to be a consolation to people who cannot afford cathedral glass lamp and electrolier shades that some of the made ones are so effective. The skill required to make a silk lamp shade is not great and the saving in making it one's self very considerable. Of course the material used must depend upon the room for which it is intended. For a living room, or library, Japanese grass cloth, edged with antique gold braid is admirable. For a parlor, filet net over a thin silk lining, or accordion pleated cretonne of a small pattern are good. The crystal bead fringe so common in the ready-made ones is not to be advised, and gives a disagreeable striped effect to the light passing through it.

When it comes to choosing a shape for the shade, the plain circular Empire pattern is as effective as any, and is more easily managed than more elaborate shapes. An eighteen-inch wire frame costs thirty-nine cents, a larger size fifty. Whatever the material chosen for the shade, a thin lining of white, cream or pale yellow silk is a great improvement, and obviates the tedious winding of the wires with silk, necessary if the lining is to be omitted.

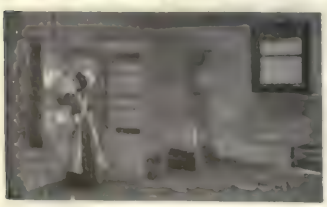
Dressing Table Lamps.

Small brass lamps come to be used instead of candles on a draped toilet table, and are much more satisfactory. They have a shade covered with the cretonne used for the furnishings of the room, or else of the popular filet net over a silk lining. The inevitable antique gold braid finishes the cretonne shades.

Blue Brocades.

Some beautiful silk furniture brocades are shown, the ground a rather deep pastel blue, the pattern an elaborate one in highly lustrous white silk, which has almost the effect of silver. Brocades like these, costing ten dollars a yard, come under the head of luxuries, and are used for covering a single large chair. They go particularly well with the beautifully carved Circassian walnut furniture, but demand a special setting, and are only suitable for formal rooms.

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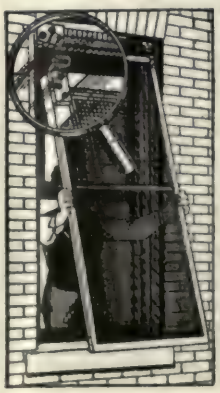
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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

G. N. S.—Enclosed please find stamped, addressed envelope for answer to my inquiries by mail. We have a fine new home in process of construction, and I would like your ideas about rugs, wall tints, furnishings, and curtains for first floor rooms.

The house fronts south, is the Old English style of achitecture. Living room running north and south with south end all windows, dimensions 26x15½ feet, finished in fumed oak, large fireplace on east, built-in bookcases at one side of fireplace. My idea was to have this room in the browns and greens of the woods. The fireplace will be of faience tile (6 in. sq.). The floor will be the narrowest white oak flooring, and I do not like to cover it all up with one rug, and would like the permanent possession of some Orientals, but am afraid small rugs would slip.

The dining room has north and east exposure, shaded on east by dining porch will be finished in ivory enamel with some oak such as top of sideboard and muntins of the French doors. Room is 14x16. What would you advise for curtains, dining table and chairs and wall tint.

The hall is wide and long, opening into living room with pillared arch and into dining room with French doors and has the broad open stairs with large fine west windows on the landing, and is finished all in oak like the living room. What color shall the walls be and what rugs and furnishings would you advise?

Now about the den which is a small room finished in natural ash, with nook and fireplace laid up with rough stone. What color shall the walls be, what kind of rugs and curtains. The den occupies the southwest corner of the house.

Ans.—In reply to your recent inquiry, your beautiful interior deserves thoughtful treatment. In the space that can be devoted to this gratuitous service, only a general outline can be given; but a more extended service can be given at the small fee of 50c a room, if you desire, in which detailed suggestions are given for walls, rugs, draperies and furniture, with samples of materials and wall coverings suggested, with prices.

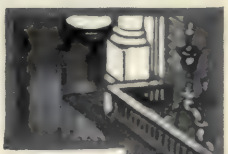
Your own ideas are well considered and you have a beautiful ground floor to carry out. The idea of the greens and browns of the woods for living room is restful and refined. Nothing could be better to carry out this than one of the greyish, lichen green tapestry papers in small inconspicuous design and with a textile or fabric surface. But it would be difficult to carry out this woodsy feeling with oriental rugs. It would be almost imperative to use mossy green Saxony or Amaxin rugs for this. We sympathize with your wish to show a portion of the handsome floor and also our experience is very decidedly against the use of a number of small rugs. We would suggest a center rug of good size, say a 9x12 or 10x13, with a narrow rug, 4 ft. wide and as long as the width of the large one, laid at each end. The smaller rugs would have to be made to order. This would give a substantial rug for the center of the room before the wide opening and in front of fireplace, with a space of floor between it and the two smaller rugs. Before the fire on this rug, we would place the davenport, with the 6 ft. library table backing up against it.

For the hall a grey grass cloth with a brownish cast to the grey, would be ideal and here we would have an oriental rug, long and not very wide, a Kazak or a Mossoul, in dull blues, old reds, etc., with a runner on the stair at least to the landing turn, to match. There should be



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draperies in the opening of warm, soft red velour lined on the living room side with some lighter material in dull greens.

The den should have a wall of grey grass cloth and since it is a southwest room, the furnishings should be rich green. We should also use a silver grey stain on the ash woodwork, a very delightful effect.

The dining room could be made very lovely with one of the grey tapestry papers in a tree design, that are like woods in a misty morning. This paper could be above a 2½ ft. dado of grey grass cloth, or of the ivory wood paneling. But it **must** have mahogany furniture and a rich crimson rug. We would stain the top of sideboard and the door trim dark, brownish mahogany, rather than oak. Then, if the dining porch has bay trees in tubs, ferns, hanging baskets, etc., and grey green grass matting on the floor, the effect will be delightful, thru the French doors.

C. W. P.—We are subscribers to your magazine and I have taken a great interest in your answers to questions so I would like to ask for a few suggestions. We are building a new house that faces the northwest, it is 41 ft. broad, the reception hall is in the center of the house, 12x13 ft., with a column arch into the living room on the north side. The living room is 13x22 ft. and has a red brick fireplace. There is a column arch from the reception room into the dining room on the south side. Would you please suggest colors for decorating those rooms. We would like burlap in the living room and reception room, up as far as the drop ceiling and in the dining room up to the plate rail. We want to decide on the decorations before we pick out our light fixtures. Also please tell me if it would be good taste to have the piano in the reception hall."

Ans.—Your letter omits rather an important point, viz., the character of the woodwork. Assuming that the woodwork is oak and that it will have a fumed brown finish, the burlaps advised for the living room side walls, is a soft ecru, with ceiling tinted a shade lighter. In the hall, side walls, a rich warm red with terra cotta ceiling carried on the side walls of the upper hall.

The dining room walls a golden burlap with ceiling tinted deep cream. The plate rail should be placed at the tops of the doors and the burlaps carried up to it. This will give a warm yet cheerful interior for a northwest facing and the rooms will open harmoniously.

There should be rich red draperies at the dining room windows and a deep, red rug, to carry the hall color in there. The best all-around choice for light fixtures, is dull, brushed brass, in simple designs. The only objection to placing the piano in the hall, is that the light would not be good.

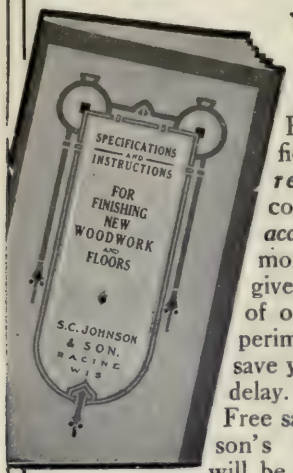
B. S. B.—"I am sending a rough floor plan of our five-room cottage which is finished in southern pine. We have no furniture. Will you kindly tell me how to make it home-like, the very cheapest way—as some of the finish is dark in places, we think it best to use some kind of stain. The floors require crack filler, but I do not know what, nor where to get it. It has a one coat plaster — the rooms I mean—would like something for draperies for windows, not the old-fashioned lace curtains, also for opening between living-room and den. This den will have couch bed and desk. Ceilings 10 ft. high.

Please suggest floor coverings for each room, etc."

Ans.—You are right in thinking it will be best to stain your woodwork and for such a cottage, brown oak or bog oak give excellent results on southern pine. The bog oak has a greenish tone and the different grains of the pine produce a mixed green and brown shade that is very pleasing. Send for booklet, free, of Handicraft Stains, which gives full information and directions and also samples of color effects. You can put it on, only be sure not to brush it in hard. Thin it and brush it on lightly. There is also a crack-filler paste for your floors. With this woodwork, if you will furnish mostly in brown stained wicker and upholster some of the chairs in green foliage cretonne, using table, desk, etc., of brown wood, you will have a very pleasing interior.

The sheer ecru scrim is the best material for your curtains. As to rugs, a mossy green Moresque Wilton, costing

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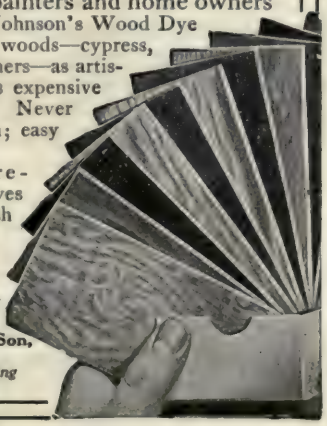
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¶ OAK FLOORING ⅜" thickness by 1½" or 2" faces can be laid over old floors in old homes, or over cheap sub-floors in new homes, at a very low cost. Cheaper than carpets or pine flooring.

¶ OAK FLOORING laid forty years ago in public buildings is still in good condition, after very hard service. For durability, OAK is the best.

¶ Any truthful landlord will advise that OAK FLOORING is a **splendid investment.** No other part of the interior finish will **increase the renting and selling values** like OAK FLOORING.

Write us for further information

The Oak Flooring Bureau

863 Hammond Bldg., Detroit, Mich.

$1.85 per yd., would be excellent in the living room, tho you could use Wisconsin Woven Wire grass in a greyish green if the carpet is too expensive. There are Japanese cotton rugs for the bed rooms, or the Priscilla rag rugs which come for that purpose. Such rugs are often described in the magazine and in the November issue are several curtain suggestions.

Mrs. G. H.—I enclose sketch of my new home. Will you please suggest colors for all rooms.

I have several pieces of pretty golden oak furniture all quarter-sawed, and rugs.

I have made rug light blue and dark blue for my kitchen, and also bath room, they will answer till I can afford better. Kitchen will have tile 4 ft., white with blue border. Now what to do for the walls puzzles me. Soon to finish the rooms, please help me.

Always thought I would like my dining room silver and old rose. Would you stain the walls gray and old rose curtains for side draperies or shades at the windows, a large house on each side of me. I bought a bolt of white goods, thought of making curtains for all windows alike full length and hem by hand. Will send you a sample, etc.

Ans.—You have shown excellent taste of your own in many of your arrangements; your blue and white kitchen is ideal. Yes, ivory paint is right for both walls and ceiling. Sherwin-Williams Enameloid for the last coat, as it gives a washable finish like varnish. If you decide to leave the walls of the other rooms in the white plaster till spring, why not wait till then about color scheme? Then write again and enclose 50c and we will send you samples of wall papers, marked with prices, for each room; also samples of cretonne for curtain draperies to go with the papers. You say you want your living room in green, but green is not a good wall color for a northwestern exposure. You can, however, have the walls a soft ecru and use green for the furnishings. This would be in harmony with the green tile of fireplace and your rug, tho such a crocheted rug is hardly suitable for a living room. It is very nice for kitchen and bath. You can also have a green cushion on your window seat and green overdraperies at the windows. The sample of material you send for curtains next the glass, will look very pretty hemmed as you say, but we fear will not launder well; it is so slazy. However, use it as long as it lasts. It would be pretty to use a narrow finishing edging on some of the curtains, stitched on the edge of the hem down the inside edge and across the bottom. Do not think you can get along without shades as well as curtains. Yes, your idea of color is all right and the outside of the house is just right as you say. But do not stain porch ceiling oak; paint it light green.

Your dining room would be lovely in grey and rose color, but golden oak furniture would not look right with that color scheme. Must be either mahogany or fumed oak or silver grey. Could be painted silver grey. You must not make the northwest bed room green; make it either rose color or a primrose yellow wall with green furnishings.



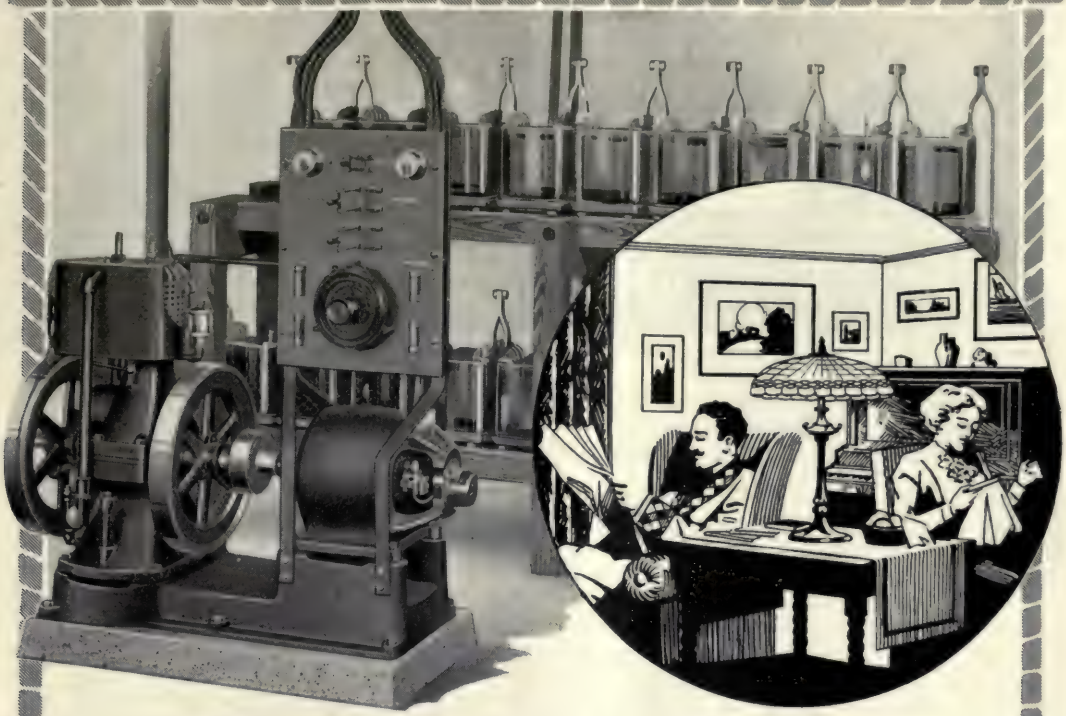
Style Book of Dutch Furniture Free Write for one today—It is the most beautiful and complete Furniture Style Book ever offered. It illustrates over 300 patterns of real **Holland Dutch Arts & Crafts Furniture** made by clever **Dutch Craftsmen** in a quaint little **Dutch City.**

It tells an interesting story about these Dutch Craftsmen, and how, why and where they make this charmingly unique furniture.

We will send you the address of our Associate Distributor nearest you where our goods can be procured. Look for our **branded Trade Mark** on every piece—this is your means of identification and our guarantee of excellency.

CHARLES P LIMBERT COMPANY

Grand Rapids, Mich. Dept. Z. Holland, Mich.



Electricity in the Home

It's the one perfect illuminant. Safe—no exposed flame. Clean—no smoke or soot. No heat. No odor. Doesn't vitiate the air by consuming oxygen as do open flame lighting systems. As a power supply it will operate scores of home conveniences and labor saving devices.

Install The Dean Electric Co.'s Home-Lighting & Power System

You can install it yourself without mechanical experience. Requires no attention except to supply gasoline and lubricating oil. The Chloride Accumulator Batteries will store up sufficient electrical energy for twenty-four hours continuous service without operating the engine. You can run wires for power and light to any point.

A WORD TO ARCHITECTS

INCLUDE the Dean Electric Company's Home-Lighting and Power System in your specifications of homes, stores and churches not situated within city electrical zones. Recommending this private system of illumination and power enables you to lay out far more complete and satisfactory plans. Its use requires no additional floor space and it is much cheaper to install and operate than other systems. Get our book free.

The Dean Engine Is Trouble Proof

The engine used in The Dean Electric Company's Home-Lighting & Power System is extremely simple in construction and operation. It has no gaskets, gear wheels, triggers, springs or other superfluous trimmings to get out of order. It is air cooled and so has no water pipes to leak or freeze. Made to be simple, reliable and economical.

OUR IRON-BOUND GUARANTEE

We know that this outfit is made right and will give continuous satisfaction as long as properly cared for. This is our perpetual guarantee: "We will at any time make good without charge any defect in workmanship or material in The Dean Electric Co. Home-Lighting and Power System."

Send for Our Large Free Catalogue

It explains everything you may wish to know about electrical illuminating and power outfits. Sent absolutely free on request.

THE DEAN ELECTRIC CO., 1012 Olive St., Elyria, Ohio

Manufacturers of Electric Apparatus, Power and Switch Boards

"Look for Dean where Quality's seen"



"The beauty of the house is order;
The glory of the house is hospitality;
The crown of the house is godliness."

THIS series of mottoes has become familiar to us in numberless illuminations; it has been carved over fireplaces and emblazoned on windows, and remains a very admirable summing up of the things which make up a perfect home, and it might, at the beginning of the winter's activities, be profitable to reflect a little on its different points.

"The beauty of the house is order."

The first thing impressed upon the student of design is the necessity of symmetry and balance. Every good design, for whatever purpose, balances, corresponds in all its parts, is built upon a perfectly regular skeleton of geometric lines. This arrangement of lines may be so intricate as to be undiscoverable, as is the case with some of the designs of William Morris, but it is there, and without it the pattern would have no artistic character.

Just as this structure of lines underlies the elaborate pattern of carpet, brocade, or wall paper, so the principle of order must underlie the whole fabric of the household life. Without it all effort is ill-directed, all results disproportioned. Its lack means spiritual and material waste. But, as in the intricate design, which is the triumph of the artist, the structural lines should not be too visible. We are all familiar with the houses where the rules of the road are plainly posted and never forgotten, and they are hardly the places which we choose for a prolonged sojourn. Beauty is best unadvertised and, if order is beauty, the less said about it the better.

"The glory of the house is hospitality."

Pleasure is doubled by being shared, and the house is a better place for having open arms for the stranger. It is often a revelation to us to see how someone else enjoys our possessions; we begin to realize that we have been unappreciative; we attach a new value to the used and the commonplace. Our peculiarly American festival ought to bring home to us the blessedness of sharing with those less favored, not always by any means the poor in this worlds goods, but the lonely, the tired, the unhappy, who may find peace within our gates.

"The crown of the house is godliness."

The word is an old fashioned one; sometimes it seems as if the thing itself had passed out of the modern world. But perhaps it has not passed away, only changed its manifestation. Deep down in the human heart lies the aspiration after the highest, but the mode of its realization changes with the generations. The old type of piety which we associate with the word godly no longer exists, except in some remote communities, untouched by modern thought, but the impulse of soul which underlay the old time pieties is not less vital, and without it the most orderly and hospitable house is a poor thing. We may call it anything we please, the Christian spirit, the social impulse, what we will, but its essence is an unselfish regard for the pleasure and comfort of others. Theoretically we are all committed to it; practically we fall very far short of it in our household life. Yet, as compared to all the other things for which we strive with such enthusiasm, it is the one end worthy our efforts.

MAJESTIC FOUNDATION COAL CHUTE



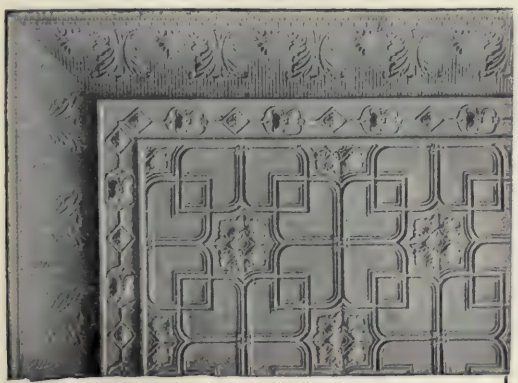
¶ Protects the building just where most needed — above the opening.
¶ The heavy steel hopper catches all the coal.



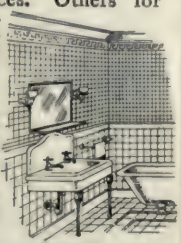
¶ When not in use, the hopper lies in the bottom of the chute body. ¶ The door locks automatically either open or closed. Strictly burglar-proof. ¶ With ¼-inch wire glass or steel panel in door.

Write for circular and address of nearest dealer.

MAJESTIC FURNACE CO.
88-98 Erie Street Huntington, Indiana



A CEILING LIKE THIS in Modern English style for your Library or Dining Room, is one of many we have appropriate for residences. Others for Parlors and Bedrooms. Beam ceilings in metal if desired, all different from those commonly seen in commercial buildings.



Sanitary---Incombustible

Nothing better for a new building or for remodeling an old one. Catalogue at your desire.

OUR TILE BOOKLET

shows just what you want for the walls and ceilings of the Bath and Kitchen.

NORTHROP, COBURN & DODGE CO.
33 Cherry St., NEW YORK



Brenlin Window Shades

TRADE MARK REG. U.S. PAT. OFF.

The Brenlin Book Before you select your shades, write for this booklet. In it are actual samples of Brenlin in all colors and in Brenlin Duplex, light one side; dark the other; and many helpful suggestions for the treatment of your windows.

Brenlin is the most attractive, durable window shade material made. It is a closely woven cloth—*not* a coarse muslin with chalk or clay "filling." It is this "filling" in ordinary shades which cracks and falls out after a few months' use, leaving unsightly cracks and pinholes.

There is no "filling" whatever in Brenlin. It will outwear several ordinary shades. It always hangs smooth and even—never wrinkles. The sun won't fade Brenlin, water won't spot it.

Brenlin is *not* expensive. There is scarcely any difference in cost—for a few cents more a shade, you can get Brenlin.

Write today for this booklet

With it we will give you the name of the dealer in your town who handles Brenlin. So that you may know that you are getting Brenlin, the name is perforated, BRENLIN along the edge of every yard. Be sure that you see it when buying, and when your shades are hung. *Chas. W. Brenneman & Co., 2066-2076 Reading Road, Cincinnati, Ohio.*

BRENLIN BRENLIN

The Use of Natural Sugar.

The craving for sweets is instinctive with most of us, but its gratification is fraught with danger to our internal economy. Sugar is sweet, but uric acid is its disagreeable converse, the last estate worse than the first. It may not be generally known that while cane sugar and glucose are injurious in the extreme, when taken in excess, other forms of natural sugar can be eaten with impunity. These forms of sugar are found in various fruits, dates, raisins, figs and prunes, and any amount of them can be eaten without injury. Moreover, a sufficient quantity of these fruits in custard, or batter, will sweeten the pudding sufficiently, without the use of sugar or syrup. Honey is another natural sweet, which ought to be used more than it is. Whether, as used by German housewives for cakes and puddings, it is more economical than sugar is a matter which depends upon the market price of honey. It is seldom cheap in cities, but country people might experiment with it to advantage. And here is a bit of experience which may help someone. The Norwegians use a great deal of honey, in its strained form, and an excellent quality is always to be found in grocery and delicatessen stores kept by them. They also have excellent and cheap fruit syrups.

Economy of Motion.

One point upon which tests are made in experiment stations is the economy of motion. If you can reduce the number of motions required for any process, it can be performed in just so much less time. Boil the water and make your coffee on the table, and you have saved just so many steps, reducing the time by a perceptible number of minutes. Economy of motion is involved in almost all mechanical improvements, in all labor-saving machinery, and might well be applied to the endless going to and fro in the doing of household work. One development of the principle is the small kitchen, with everything in easy reach. Another is the wheeled table, by means of which all the dishes from a meal can be carried into the kitchen at once. A little thought enables one to apply it to all the work of the day, even to minor matters of personal care.

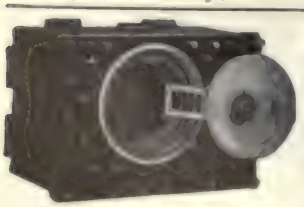
There is a side issue to learning to do things with the least possible expenditure of energy, which is the great advantage of such habits when old age, with its dulling of the natural energies comes on. When every motion is a source of fatigue, the fewer needed the better. Personal neatness, making the most of one's good points, need not be a matter of slow and complicated process, but a rapid adaptation of means to end, carefully thought out and systematically carried on, almost mechanically.

Buying in Quantities.

If the stores are in the hands of the mistress of the house, it is worth while to buy some things in quantities, but it is well to remember that many articles of food deteriorate. Cereals are apt to become wormy, and this is especially true of the coarse flours. Sugar loses its flavor and roasted coffee its strength. Canned goods, tea and cocoa in air tight receptacles will keep a long time. Raisins, currants and the like get very dry, but can be brought back to their original condition by steaming them. Candles improve with age if stored in a dry place, and soap goes fully twice as far if well dried.

Portable Refrigerators.

One of the small portable refrigerators which come specially for nursery use, ought to be kept in every house, even if there are no young children, as it is invaluable in the sick room. It enables one to dispense with the array of glasses and bottles on the outside of the window, and obviates the necessity of frequent opening of the window, often a source of real danger to the patient or the nurse. A refrigerator holding perhaps ten pounds of ice and with a good sized cold chamber, costs about $3.50, with smaller sizes even cheaper.



Exclusive Sales Managers,
WILLIS MFG. CO., Galesburg, Ill.

Do not fail to have a
Gale Wall Safe
in your new home. It makes your valuables safe against fire, thieves, etc. No home or apartment house complete without one. Made of a combination of Iron and Steel equipped with a combination lock.

GALE WALL SAFE CO.
554 Empire Bldg., Seattle, Wash., Selling Agents.

The Home of Wholesome Food



A Germless Food Compartment

A Snow-White Solid Porcelain Compartment

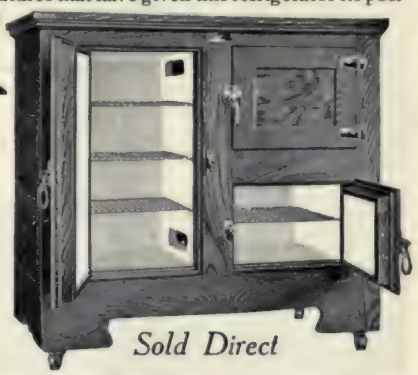
It does away with cracks, joints, crevices, corners and other natural hiding places for dirt, odors, decaying food and dangerous microbes found in other refrigerators—the one *really sanitary* food compartment.

The "Monroe"

A Lifetime Refrigerator

Send for Our Free Book on Home Refrigeration

It tells you how to keep your food sweet and wholesome—how to cut down ice bills—what to seek and what to avoid in buying *any* refrigerator. It is packed with money-saving hints, and every housewife and home owner should have one. It tells all about the "MONROE"—describes its wonderful lining and the many other grand features that have given this refrigerator its position as the world's best.



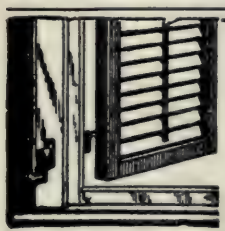
Sold Direct

The "MONROE" is sold direct to you—at factory prices—on 30 days' trial. We pay the freight and guarantee "full satisfaction or money back." *Liberal credit terms if not convenient to pay cash.*

The "MONROE" is the **ONE REFRIGERATOR** with each food compartment made of a solid piece of unbreakable snow-white porcelain ware with every corner rounded as shown in above cut. The **ONE REFRIGERATOR** accepted in the best homes and leading hospitals. The **ONE REFRIGERATOR** that can be sterilized and made germlessly clean by simply wiping out with a damp cloth. The **ONE REFRIGERATOR** that will pay for itself many times over in a saving on ice bills, food waste and repairs. The **ONE REFRIGERATOR** with no single point neglected in its construction, and suitable to grace the most elaborate surroundings.

MONROE REFRIGERATOR COMPANY

(15) **Station 6, Lockland, Ohio**



MALLORY'S
Standard Shutter Worker

The only practical device to open and close the Shutters without raising windows or disturbing screens.

Can be applied to old or new houses, whether brick, stone or frame, and will hold the blind firm in any position.

Perfectly burglar proof.

Send for Illustrated Circular **if your hardware dealer does not keep them, to**

MALLORY MANUFACTURING CO.

251 Main Street Flemington, New Jersey, U. S A.



A COZY FIREPLACE
FOR YOUR HOME

Send for This FREE BOOKLET Telling How to Get and Install Any Design

The fireplace is the heart of the home. No house is really a home without its cheery blaze on winter evenings. If you are building or thinking of remodeling, you owe it to yourself to send for our beautiful booklet, "Home and the Fireplace." It tells all about **Colonial** Fireplaces—the only real advance in fireplace construction in the last century—all about the **Colonial** Plan, which makes obtaining a fireplace as simple as ordering a picture. It contains beautiful illustrations of **Colonial** designs, and tells how you can have a special design made free of cost. **Colonial** Fireplaces are adapted to any fuel. They radiate a full warmth all over the room. No inconvenience—no dirt—absolutely **all** smoke goes up the chimney. The only up-to-date fireplace. Recommended by leading architects. **You need this book—write today**—just send us your name and address—but we suggest you write at once. Just drop us a line right now. (16a)

COLONIAL FIREPLACE CO., 1773 W. 12th St., CHICAGO

HESS MEDICINE SANITARY CABINET LOCKER



The Recessed Steel Medicine Cabinet

The Only Modern, Sanitary STEEL Medicine Cabinet

or locker finished in snow-white, baked everlasting enamel, inside and out. Beautiful beveled mirror door. Nickel plate brass trimmings. Steel or glass shelves.

Costs Less Than Wood

Never warps, shrinks, nor swells. Dust and vermin proof, easily cleaned.

Should Be In Every Bath Room

Four styles—four sizes. To recess in wall or to hang outside. Send for illustrated circular.

HESS, 917 L Tacoma Bldg., Chicago

Makers of Steel Furnaces. *Free Booklet.*



Preparing and Serving Winter Fruits



TWO MODES OF SERVING PINEAPPLE.

CLOSE connection by rail and steamer between North and South, East and West, has made the list of winter fruits a larger one than it was fifteen or twenty years ago. If one be disposed to pay extravagant prices one may even indulge in peaches, plums and strawberries while the snow is flying, the first and second coming all the way from Africa, packed about with cotton as if they were Crown jewels, while the strawberries from Bermuda or Florida can be had at holiday time for a dollar a quart. But, after all, these are not the real fruits of winter, which are now bananas, oranges, pineapples and apples, with the dried fruits —figs, dates, prunes and raisins—pressed into service for variety's sake. White or Malaga grapes, too, can be had the year round.

Anyone of the fruits mentioned are delicious raw, and for the little folks, dates and prunes are certainly preferable to sweets.

In serving pineapple raw and without

65 Years Ago—Quality

From the starting point back in 1847, when Rogers Bros. silver plated ware was first made and sold, there has been no reduction in the original superior quality. To-day the trade-mark

1847 ROGERS BROS. X S TRIPLE

represents the highest grade of triple plate. Our process of finishing closes the pores of the silver so that it is worked into a firm, hard surface that will stand years of the hardest kind of wear. This process has given 1847 ROGERS BROS. the well-earned title of

"Silver Plate that Wears"

Sold by leading dealers. Send for illustrated catalogue "Q-35"

MERIDEN BRITANNIA CO., MERIDEN, CONN.
(International Silver Co., Successor)
NEW YORK CHICAGO SAN FRANCISCO HAMILTON, CANADA

"Silver Plate that Wears"

TO-DAY—Quality, Beauty, and a Reputation Unsurpassed



When It's a Case of Keeping the Food Right

then you ***must*** have a McCray.

Built to give active cold air circulation inside, acting on Nature's rule that heat ascends and cold descends. This with the heat excluding construction of the McCray walls, gives a low temperature and a dry, cold circulating atmosphere that keeps foods at their best.

McCray Refrigerators

are made in all stock sizes to serve the needs of the smallest or the largest family. No refrigerator in the world is made more carefully or closer to the ideal of perfect ventilation and refrigeration by circulation of cold, dry air. Most sanitary, easiest cleaned linings, opal glass, enamel, porcelain, or odorless white wood—**no** zinc—generous capacity—thorough workmanship.

The McCray Refrigerator will protect the family's health and give unequaled service.

Any of the stock sizes can be arranged to be iced from the outside, thus avoiding the inconvenience and muss of the ice man. You get every special feature in a McCray stock size.



Write for Free Book "How to use a Refrigerator" and any of the following catalogs:

No. 88—Regular sizes for Residences *No. A.H. Built-to-order for Residences*
No. 68—For Groceries *No. 59—For Meat Markets*
No. 49—For Hotels, Clubs, Institutions *No. 72—For Flower Shops*

McCray Refrigerator Co., 408 Lake Street, Kendallville, Ind.

oranges, select two small pines, judging their ripeness by trying to pull out one of the spiky leaves. If it comes out easily with a delightful odor following its removal the pine is just right for eating. If the leaf is dark at the base the fruit is too ripe. If it refuses to come out the fruit is too green. Cut off the top of one pine and scoop out the pulp, which chop in small cubes. Pare the other and also chop, for it will take the two to fill the one shell. Mix with powdered sugar and pile in the shell, then sprinkle with sherry or with orange juice, put on the top and chill. Serve in the shell.

Apples, bananas and white grapes need only to be rinsed and dried off before serving raw, but a banana is much more wholesome if the surface be scraped with a teaspoon or fruit-knife before the pulp is eaten; also a little sprinkle of salt improves the flavor of either raw apples or bananas.

To give a passing notice to the dried fruits: the prune has been served in pies, whips and as a sauce, but the prune jelly cake or, more properly speaking, layer cake, is sufficient of a novelty to be worth giving a recipe for. For the filling, soak the prunes overnight in very little water, reserving some of the largest and finest for the decoration of the cake. In the morning simmer or cook in a double boiler in the water in which they were soaked, adding to every pint of prunes two tablespoonfuls of sugar and the juice of half a lemon. When the prunes are soft remove from the juice, which cook down until it is a thick syrup. Make two layers of cake by any plain layer cake recipe and put together with the cooked prunes, which have had the stones removed, pouring on enough of the syrup to moisten the lower layer of cake. Put on the upper layer a soft white icing flavored with lemon, and on this put a ring of the reserved prunes, which have been soaked for a few minutes in boiling water, to soften them, then the stones removed and a mixture of chopped almonds and ginger put in with each slice. Prune pudding is made by preparing the prunes as for the cake filling, removing the stones and putting back on the fire with the water in which they were cooked, and thickening this with five tablespoonfuls of cornstarch for every quart of prunes and juice. Flavor with lemon or cinnamon; boil for five minutes after the addition of the cornstarch, then pour in a mold and let stand in a cold place for several hours. Serve with cream and sugar, or a sauce made of prune juice thickened with a little cornstarch.



PRUNE LAYER CAKE.



Keep Your House Clean
Without Work

It's over! All the laborious sweeping—dusting—beating of carpets and rugs—moving of heavy furniture. All the futile back-breaking work that cannot keep a house really clean. The

TUEC **STATIONARY Air-Cleaning System**

is the housewife's emancipation.

Installed in the cellar with connecting pipe to each floor, it sucks in every grain of dust, drawing it down to the cellar where the dirt is caught in an air-tight receptacle and the dusty, germ-laden air passes outdoors.

No dust remains on carpets, walls or furnishings. No dust is stirred up from one place to settle in another. Your house is always scrupulously clean and absolutely healthful—all this without dragging a heavy machine from place to place and without a moment of tiring work.

As a stationary system has solved your heating problem, so you must look to the TUEC to solve your cleaning problem. Easy to install in any building, old or new, large or small, public or private. A special type machine for homes using a gas engine to generate power.

Actual use in thousands of buildings proves the TUEC to be *the* system for any house.

Write today for illustrated booklet and letters from owners of TUEC-equipped buildings in all parts of the country.

THE UNITED ELECTRIC CO.

10 Hurford Street - - - - - **Canton Ohio**

TUEC Companies in All Large Cities

Make Your Own Gas



THE pleasure of living in the country or small town is greatly enhanced by a few city conveniences, the most necessary and comfort giving of which is a **Satisfactory Gas Supply.**

Gas to Light with.
Gas to Cook with.
Gas for Laundry purposes:
Gas to heat water for the bath and other uses.
Gas to operate a gas engine for pumping and other purposes.

You can have all these conveniences cheaply and automatically by installing the

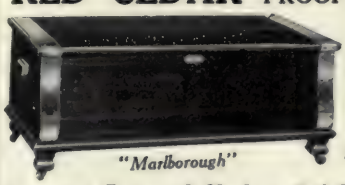
DETROIT Combination Gas Machine
FOR ILLUMINATING AND COOKING

Will not increase your insurance rates. On the market over 40 years. More than 15,000 in use in Residences, Stores, Factories, Churches, Schools, Colleges, Hospitals. It will Pay You to investigate. Write us today—NOW—a postcard.

DETROIT HEATING & LIGHTING CO.
362 Wight Street
Detroit, Michigan
Attractive Proposition to Plumbers



RED CEDAR MOTH PROOF CHEST



"Marlborough"

ONLY $15.75

We pay the freight east of Rocky Mts.

Size { 41 in. long, 19 in. wide, 17 in. high

Protects Furs and Clothing Red Cedar is Nature's sure protection against moths and vermin. Keeps furs, blankets, silks, laces, woolens always safe, clean, in perfect condition. **A thing of beauty** in any home—a most suitable wedding gift. From factory to you—**you save dealer's profit.** Send today for catalog of great variety of chests, kitchen cabinets and writing desks.

THE JEWEL CABINET CO., Dept. 63, Downers Grove, Ill.

Send for the ALDINE BLUE BOOK and see how the ALDINE FIRE PLACE will heat your house.



Requires less than half the fuel and gives 85% of the heat uniformly into the room instead of 15% given by all other grates.
Burns any kind of fuel.
Keeps fire over night.
Requires **no** special chimney construction.
Made for old houses as well as new.
Satisfaction guaranteed or money returned. 60,000 now in use.

RATHBONE FIREPLACE MFG. CO.
5603 Clyde Park Ave. Grand Rapids, Mich.



A Large Municipal Garbage Reduction Plant

The First of Its Kind Erected by a Municipality



Fig. 1. MUNICIPAL GARBAGE REDUCTION PLANT AT COLUMBUS, OHIO.

SOMEBODY once said that a modern packing plant utilizes every part of the American hog except the squeal. In point of efficiency the new Municipal Garbage Reduction Plant of Columbus, Ohio, belongs in the same class, for in disposing of 80 tons of garbage every day, it wastes nothing except the water in the garbage.

The plant as a whole consist of four buildings, the Unloading Building, the Reduction Building, an Office Building, and a small Stable.

The Unloading Building is used for the unloading and assorting of all garbage delivered at the plant. It is 45 feet by 85 feet and has elevated railway tracks extending through it. The Reduction Building contains the reducing machinery consisting of digestors, roller presses, grease separating tanks, refining and storage tanks, drying equipment and evaporators. It also contains the boiler plant, machine shop and water supply pumps. The part containing the digestors, presses, dryers and storage rooms is three



Drawing of the Residence on Bitter Root Stock Farm, Hamilton, Montana: Owner, Mrs. Marcus Daly. Roofed with Asbestos "Century" Shingles.

This notably fine and pure example of modern colonial architecture is the residence on Mrs. Marcus Daly's Bitter Root Stock Farm, Hamilton, Montana. It is built of brick, with white woodwork. The roof, the dormer windows and the triangular space over the portico are covered with

Asbestos "Century" Shingles

"The Roof that Outlives the Building"

In a building of this kind, architectural fitness is the prime factor in the selection of a roof. Its price is hardly a consideration.

Yet no property owner will ignore the fact that an Asbestos "Century" Shingle roof costs no more than any other first-class roofing.

That it needs no repairs and no painting—no upkeep charges—that it is proof against fire—that it never "grows old."

Asbestos "Century" Shingles are the first and only *practical light-weight roofing made of reinforced concrete.*

Ask your responsible roofer—or *write us.* We'll send you our booklet, "Roofing: A Practical Talk," presenting many roofing pointers of great value to property owners.

Keasbey & Mattison Company, Factors

Dept. G

Ambler, Pennsylvania

Branch Offices in Principal Cities of the United States

stories high, and the other part one story high. This entire building covers a space 80 feet by 167 feet and is provided with a radial brick chimney, 72 inches in diameter and 150 feet high, constructed for the boilers and the gases from the reduction machinery.

Both the Unloading Building and the Reduction Building are fireproof, with steel columns, floor beams and roof trusses, and concrete floors. The walls are of brick, and the roof is constructed of hollow terra-cotta tile on which is laid 4-ply Asbestos Built-up Roofing.

This Asbestos Roofing is an all-mineral covering, especially adapted for flat-topped roofs on account of its great durability. It is built upon the roof of successive layers of pure Asbestos Felt and Trinidad Lake Asphalt, both of which are weatherproof and fireproof materials, unaffected by gases, heat, cold or acids.

The Stable is a two-story building, on the ground floor of which are stalls for 106 horses and the harness room; feed is stored on the floor above.

When garbage is delivered at the plant, it is dumped into loading cars, weighed, and then spread upon the floor of the Unloading Building where the free water is drained off and the grease in the swill water separated by evaporation. After the garbage is assorted, it is conveyed to the digestors, of which there are eight, where it is cooked from six to eight hours with steam at 60 to 70 pounds pressure. When cooked, it is discharged into a receiving hopper which is directly connected to a roller press. Four digestors, one receiving hopper and a roller press constitute one unit, and there are two of these units in the plant.

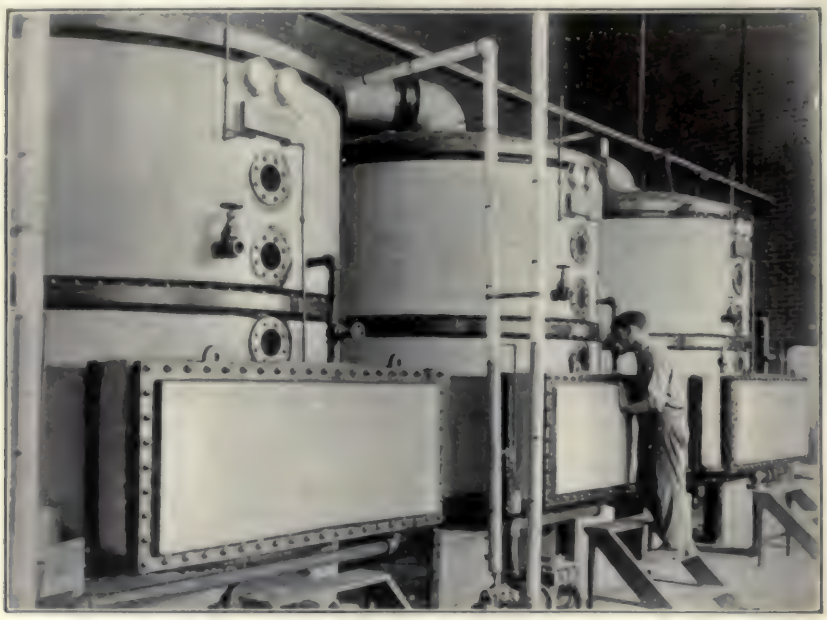


Fig. 2. INTERIOR VIEW OF THE MUNICIPAL GARBAGE PLANT SHOWN IN FIG. 1.

As the material passes through the press, the water and grease pressed out are conducted to separating tanks where the grease is separated from the water by gravity. After separating the impurities from the grease by heating, the grease is pumped into storage tanks for shipment and sold for approximately $100.00 per ton.

The tank water, after the grease has been separated, goes to an evaporator where it is condensed and comes out in the form of a syrup. The solid refuse from the roller presses is fed into a revolving cylinder dryer constructed with a steam jacket and a blower. To this

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material, when dry, is added the concentrated syrup from the evaporator, which produces a high grade of tankage from a mechanical and fertilizing standpoint, and this is stored for shipment and sold for approximately $10.00 per ton.

The electric current for both lighting and power is furnished by the municipal light plant at the cost of 1½ cents per kilowatt-hour. An independent motor is connected with each power driven unit and operated with 440 volt, 60 cycle, 2 phrase current. The boiler plant consists of three horizontal tubular boilers 78 inches in diameter by 20 feet long. Two of these boilers are in regular service and the third is held in reserve.

All the steam pipes, evaporators and dryers, also the digestors (in part), are covered with Magnesia Blocks finished with Asbestos Cement and canvas jackets.

During the first six months of 1911, there was received at the plant 7,066 tons of garbage which resulted in net receipts of $29,615. This showed a profit of $2.07 per ton over the cost of disposal of the garbage.

As an illustration of what can be done by a Municipal Garbage Reduction Plant efficiently designed and carefully operated in a city of 182,000 inhabitants, this Columbus plant establishes an encouraging precedent.



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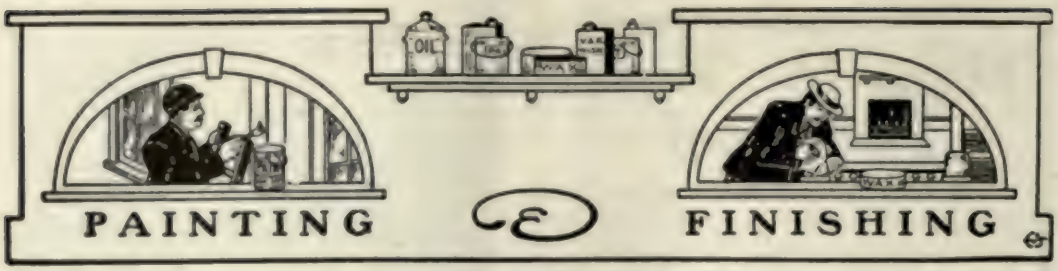


JACK'S HOUSE

This is the house that Jack bought.

As an investment it did not give very large returns.

SAID JACK: "I must improve the looks of this house. I'll write to the North Western Expanded Metal Co., 930 Old Colony Building, Chicago, Ill, for their booklet 'O', which contains full information for 'overcoating' old houses."



A Final Survey and Caution.

WHEN the painter is finished, the house swept out in such a way as not to raise the dust, and you stand back and look at your hardwood, are you quite satisfied? Is there not a sort of a lurking suspicion that the ideal and the realization don't quite "jibe"? You would not so much as hint this to Mrs. Berry Murphy, but when by yourself of a Sunday afternoon and the rain is falling on the roof?

Now, the work of the painter counts for much in a new house, and if there is often dissatisfaction there may be a reason for it. Of course there are painters who spoil good woodwork, but even the best painters cannot come up to the samples, and therein is the cause of much grief.

To begin with, it would take a small fortune to finish a house in the way that the samples of hardwood given you by the dealer are polished. They are sandpapered and pumice-stoned until the surface is like glass. This is done between each coat on a piece of wood about 2x6 inches, on one side. Even a single door treated both sides that way, with painters' wages at 40 cents per hour, would cost so much as to make you throw up your hands. What about a whole house?

The merchant is accused of putting his best wares in the window, and some say that the farmer puts the best apples on top of the barrel. Are the manufacturers of interior finishes not human like the others?

The samples are not only small, but the very best lumber is used. Could you pay for such lumber all through a house? They are finished in a room heated to an even temperature, which is essential to good work, and dust is kept away. A house is often chilled with damp plaster and raw air coming in, and this alone spoils the flow and even effect of the varnish. The dust is as likely as not to be flying in the air and mixing with the liquid in a way that is bad for the work, and carpenters and plasterers are struggling to get out of the road of the incoming furniture, while the poor painter is doing his best as he whistles "Always in the Way."

Another trouble is "running." If you varnish a table top or a floor you can spread the liquid on evenly, and if the room is properly heated it will dry without flowing, but it is not so easy to finish upright work.

With these things in mind it is, therefore, unfair to expect a piano finish from any painter unless prepared to turn every one out of the house before the painter goes in, to maintain it for a couple of months at an even temperature, and to pay a very high price for work that would still not come up to the samples. What can be expected with two-coat work? Do you pay the same price for muslin as for silk? All this, however, does not excuse the painter for making even cheap work look poorer than it should, but it shows that a more reasonable view should be taken of the hardwood finish than many a woman feels like taking. Before going ahead it is a good idea for both painter and owner to have a large piece of wood finished according to the way the house is going to be. Then the woodwork can be compared with the sample. Heat should be supplied to the painter and dust and damp kept away. He also requires good wood to work on—and a good price for his work.—The Building Age.

Rusting of Iron.

Wrought-iron work, if not properly cared for in respect to painting, or under conditions otherwise bad, may be expected to rust at a rate which corresponds to the loss of one-eigth inch on each surface for from fiften to thirty years; but with proper care as to painting, and ex-

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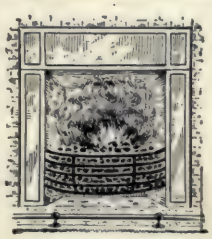
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Residence of J. E. Wing, Mechanicsburg, O.
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"The house is framed in the usual way, and sheathed solid with hemlock boards, put on over Sheathing Quilt nailed to the studding."—Country Life in America, March, 1907.

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The house will always be warm in winter and cool in summer. The quilt will save enough coal in two average winters to pay for itself, and then it will keep on saving fuel and doctor's bills and making the whole family comfortable as long as the house stands. It is cheaper to build warm houses than to heat cold ones—and more healthful and comfortable.

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clusive of exceptionally bad conditions, it does not appear to waste at any measurable rate. In some instances, upon scraping the paint from girders which had been in use for thirty years, the writer has found, beneath the original red lead, the metallic surface, bright and clean, showing no trace of rust. Of ordinary steel work the same cannot be said, the common experience being that mild steel is very liable to be attacked by rust. With common care in the bridge-yard during manufacture, such that with wrought iron no after trouble would be noticeable, steel is very liable to show, within a year of being built up, numerous little blisters on the painted surface; any one of these being broken away discloses a small rust-pit. This is more often seen on the flange surfaces (horizontal) than on the web surfaces (vertical), but it is probable the position has little to do with the matter, and that it is rather due to the fact that rust has been earlier started on the flange-plates.

(2) Ordinary paint will form a preservative for ironwork, especially when the base used for the paint is red oxide of iron. Red and white lead are both used, but are likely to be acted upon by carbonic acid gas, etc., and galvanic action may also occur. Paint should be applied to cast-iron as soon as possible after it has left the mould, before rust has had time to form. The cast-iron should first receive a coat of linseed oil before the iron has become cold. Various patent preparations—such as graphite, etc.—are largely used for the painting of railings and outdoor ironwork, and are found to last longer than ordinary paints.—Canadian Engineer.

Cleaning and Staining Pressed Brick Fronts.

In the case of a building having a front of red pressed brick which has become more or less stained from sparrows roosting upon the projections, efforts have been made to wash off the traces left by the birds with all kinds of soaps, but without satisfactory results. The contractor who is doing the work of cleaning the brickwork writes to the Painters' Magazine asking for the name of an acid solution that will remove the stains and also for a recipe of a brick wash or stain to renew the color.

In replying to these queries the authority in question says: Use what is known as builders' acid, commercial hydrochloric (muriatic) acid, diluted with its own volume of water, or, if necessary, full strength. Protect the hands with rubber gloves or gauntlets while using the acid with fiber brushes, and wash the surface immediately after with plenty of clear water. The simplest brick wash or stain is made by taking a Venetian red or red oxide of the right shade and mixing it into a medium stiff paste with ordinary water, then thin down this paste to the consistency of a stain with stale beer or stale ale. To every gallon of such stain you must add 4 oz. of calcined copperas (iron sulphate), which is green copperas heated in an unglazed earthenware dish, until it forms into a white powder. This is added so as to make the stain insoluble, otherwise rain would be apt to wash it off. In adding the calcined copperas to the stain rub it into a smooth paste with a little of the stain. —Building Age.

In the February issue in this department, the article by Dr. Geo. B. Heckel entitled "The Failure to Paint Greater Than the $250,000,000 Than the Annual Fire Loss," was published and by oversight was not credited to the source of the article, the American Paint & Oil Dealer magazine.

We desire, therefore, to rectify this oversight by the publishing of this notice.



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"BEST HOUSE PLANS," a beautiful book of 200 modern homes costing $500 to $8000. I have had many years experience in planning houses, cottages and buildings, well arranged, well constructed and economical to build. If you want the BEST RESULTS, consult a man of experience and reputation for GOOD WORK. This book gives plans, exteriors and descriptions. Price $1.00. "BUNGALOWS and COTTAGES," a new book showing 50 up-to-date designs, all built from my plans, pretty one-story bungalows and cottages. If you want a small ECONOMICAL HOME, don't fail to send for one of these books. Price 50c. For $1.25 I will send you BOTH BOOKS. To prospective church builders I send my portfolio of churches for 25c.

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Heating, Lighting and Plumbing

The Illuminating Engineer

A NEW YORK THEATER failed and closed its doors. Originally this theater had the usual direct lighting system, which is to say it contained a lot of naked incandescent electric light bulbs scattered around the place with about as much intelligence as a Brule Sioux might be expected to display in their arrangement. Many of them were disposed so that their light struck the audience in the eyes, just as many lights do in more pretentious places of public assembly today. It has been found that a single incandescent light in the range of vision reduces the power to see at least twenty-five per cent. Naked lights more than twenty-five degrees outside the direct line of sight do not interfere with visual acuity, but lights of high intensity even farther removed from range will make people restless and irritable, as any one can testify from his own experience.

The illuminating engineer took down every exposed light in the theater, and although the architectural arrangement made it impossible to attain ideal results, he managed to hang the lights so that none could be seen from any part of the auditorium. Instead of a direct glare the light was thrown against the ceiling from which it was reflected in a soft diffused glow at a carefully calculated intensity that caressed and soothed tired eyes like summer zephyr. Every one who came in gave a sigh of relief and just relaxed rather than sat down. The audiences thought they were witnessing the supreme efforts of transcendent genius on the stage when, as a matter of fact, it was merely their outraged nerves being soothed by scientifically modulated light that put them in such fine humor. It was the new illuminating engineer, not the ancient soubrette, who transformed a hopeless failure into success in its most aggravated form. Now the manager is planning an automobile trip in Europe.

This is a fair example of what the illuminating engineers are doing whenever they get a chance. It may be added that the chances are coming along about as fast as they can be taken care of. While it is the newest of the learned professions illuminating engineering is attracting more attention than all the rest combined just now.

Formerly the whole matter of lighting was left to the architect. He prescribed the number, location and candle power of the lights. The result was that the illumination often fell far short of, or greatly exceeded, requirements. It was the usual thing to place excessively bright lights in the ordinary field of vision with the result that the eyesight of the whole race of city dwellers was being permanently injured.

The most prominent feature in a notable year of progress in electric lighting was the development of the tungsten incandescent light. Tungsten is decidedly the best material for incandescent lamp filaments that has yet been found. The trouble with it at first was its extreme fragility. The slightest jar, or even a rude stare, would shiver a tungsten filament to fragments. But now they have learned how to make tungsten ductile and its use is increasing enormously. But the people who are flourishing most are the manufacturers of the various accessories of illumination. Installations ten years old are now considered obsolete, and hence must be replaced. Globes and shades are no longer turned out any old way, like tacks, to be sold for what they will fetch. Nowadays "glassware" is pre-

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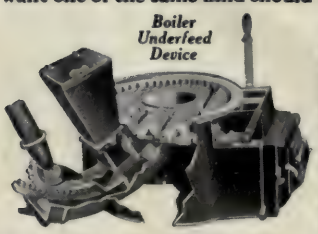
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ARE YOU one of the thousands who suffered discomfort during the unusually cold winter of 1911-12? While in many homes ordinary heaters were ***wasting coal*** and yielding ***little heat;*** while natural gas supplies were running short, in thousands of other homes Underfeed Furnaces and Boilers were making good with ***adequate, clean, even*** heat—and at a ***saving*** of one-half to two-thirds the usual cost of coal. The Underfeed Booklet Tells Why —It is yours for the asking.

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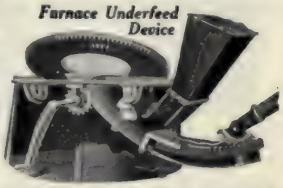
If your heater—new or old—is defective, unsatisfactory or expensive to maintain, ***replace it*** with an Underfeed which soon pays for itself in reduced coal bills. If you are about to build, install an Underfeed Furnace, Steam or Hot Water Boiler. Either is adapted for buildings, large or small—residences, offices, churches, hotels, etc. 'Twill add to the renting or selling value of ***any*** building.

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In the Underfeed coal is fed from below. All fire is on top. Smoke and gases (heat units *wasted* in other heaters) must pass *up through the fire* in the Underfeed, are consumed and make more heat. Cheapest slack, soft coal, and pea and buckwheat sizes of hard coal, yield as much heat in the Underfeed as *highest* priced coal in ordinary furnaces and boilers. The few ashes are removed by shaking the grate as in other furnaces and boilers.

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scribed by the illuminating engineer like a dose of medicine. This keeps the manufacturers so busy they have no time to cut prices and so they are making a little money.—Tech. World.

The Importance of Vacuum Cleaning to the Ventilating Engineer.

A review of the progress of vacuum cleaning and an estimate of the present and future state of this branch of engineering were brought out at the recent meeting of the heating engineers in a discussion devoted to the topic of the importance of vacuum cleaning to the ventilating engineer. President Bolton stated that it was very interesting to see how the heating profession is reaching out in this direction. As far as the speed of the cleaning is concerned, the vacuum cleaner can never compete with the broom. We made a test in one schoolroom and allowed all the vacuum cleaner men to clean a room around the seats. The work required from 15 to 26 minutes. Then we put a janitor in with a broom and he did the same work in between 3½ and 4 minutes. As far as the work is concerned, it is a little more work for the janitor to sweep with the cleaner than with the broom. Undoubtedly there has been a great advantage in the elimination of dust and the vacuum cleaner recommends itself for introduction in school work for that reason.

Relative Economy of Intermittent and Continuous Heating.

A chance remark made at the recent summer meeting of the heating engineers led to an extended discussion of a subject that was not down on the program, but which proved one of the liveliest interest to those present. Speaking to the topic of "The Operation and Care of Heating and Ventilating Apparatus," William M. Mackay made the observation that "it takes more coal to raise the temperature in a building than it does to maintain it."

In designing work, I usually tell the owner that it will be cheaper for him to keep up steam continuously during the heating season than to let the building cool off at intervals. Several look at the statement skeptically, but, after a trial, they find it is cheaper for them to keep up steam and give the apparatus the care that it requires.

Any heating apparatus, operated intermittently, also suffers greatly from wear and tear. Steam fitters will tell you that in such cases they are often called upon to replace cracked radiators and bursted sections or leaky tubes of boilers.—Heating & Ventilating Mag.

Co-Operation of Architects in Furnace Heating.

It is a sign of the times that those who select the furnace system of heating their homes will get better service when there is such a wide feeling that the method of installation is entitled to better and more intelligent consideration. It is worthy of the expenditure of some energy to accomplish such advances as will make the general practice more nearly like that of the men who do the work right or refuse to do it at all. There is no scarcity of leaders in the right direction. Apparently they can be found in every center. What is neded is followers. In New York City architects make provision for the risers which furnace men of standing insist is necessary for good results, while on the other side of the Mississippi River there is evidence that the architects frequently provide 2x6 in. studs so that risers of proper dimensions cannot be installed to allow the air at low temperature to flow freely and in volume. On the other side of the Rocky Mountains there are furnace men who design furnace systems, and the architects who plan the buildings make provisions to accommodate the furnaceman's design. It is a well-known fact among the best furnacemen that there is little difference as to which of a number of first-class furnace constructions be used if the piping in the building has been done right. Right means that the shape and capacity will be sufficient as well as that every precaution has been taken to eliminate friction, which is a matter for more important consideration than is given to it by the multitude of furnace heating contractors. —Building Age.

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They are also recommended by manufacturers of composition wall board as one of the most satisfactory finishes for wall board ever devised.

Made in White and a variety of beautiful shades.

Descriptive color card and free demonstrating sample sent upon request.

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SPLINTERS AND SHAVINGS

Must the Roof Leak?

WE frequently hear of leaky roofs? Oh, yes, some people expect a roof to leak! Do we ever hear of a basement wall being faulty? Sometimes, and then the builder catches it from all sides. But why spend money for an elaborate cut stone foundation and watertable, and cover the roof with the cheapest grade of shingles and know, yes, know, that in a few years you will see water stains on the ceilings and find the things in the attic all soaked and winter almost on you. The first time this happened, there was possibly a little excuse for it, for no one knew any better, but in the light of present day knowledge, one is going right against the recognized principles of construction when anything but the best is put on the roof. Submit it to an expert and see what you hear.

For many years the value of sheet metal for roofing has been generally recognized. As a protection from weather it is rain, snow and wind proof. As a protection against fire, it will hold out until the framing is burned from beneath it, and has even been known to hold in and practically check a fire by settling down like a blanket. Thus, for utility, metal excels, and as for appearances, one can get the same detail as in stone or any other material, as well as some designs which belong entirely to metal.

As to the form of roofing, there is a wide choice. It may be in large sheets, as corrugated iron, used on factories, sheds, etc.; in flat sheets for flat roofs of apartment houses, stores, etc.; or it may be in highly ornamental stamped plates or tiles.

While resembling in finish the clay tiles used both here and abroad, they have none of the disadvantages of the clay product. Being stamped in the same press, they are all exactly the same size, not subject to shrinkage in burning, and the edges are so thin and flexible that they can interlock, making a perfectly tight roof. It is generally said that a clay tile roof is as tight as the tarred felt put under the tile, but with metal tiles there are no open joints for the snow and rain to blow in.—National Builder.

Change of Name for Oak Flooring Grades.

On November 1st, the manufacturers of oak flooring found it necessary to make some changes for the oak flooring grades. Heretofore the grades were generally known as "Clear," "Sappy Clear," "Select," "No. 1, Common" and "Factory."

The names are now, for quarter-sawed flooring "A" Grade in place of Clear and Sap Clear in place of Sappy Clear. For plain-sawed flooring "A" Grade in place of Clear, "B" Grade in place of Select and Common in place of No. 1 Common. The Factory grade remains same as heretofore.

The reason for these changes was brought about on account of the confusion caused by the old names. For instance, the Select grade often was misunderstood for the Clear. For the present, or until the architects, dealers, contractors and all concerned, are thoroughly familiar with the new names, the old names will be carried along in parenthesis for comparison. It is hoped that within a year the use of the old names can be eliminated.

When these new names will have been established, the results will be far reaching towards the right utilization of oak flooring grades. Each bundle of oak flooring is stamped by the manufacturer to show the name of its grade, to avoid any misunderstanding by the dealer or the ultimate buyer.—Amer. Car. & Builder.

* * *

The penalty for failure to conform with building laws is strikingly illustrated in a city in Montana where the owner of a building, who shingled the roof without securing a permit for the work, was ordered to take off the roof and then had the building condemned as well.

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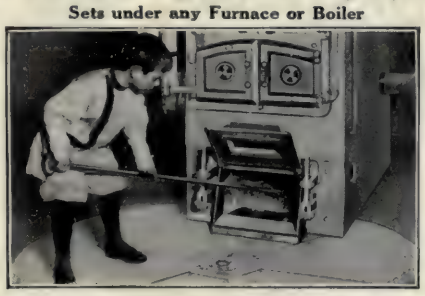
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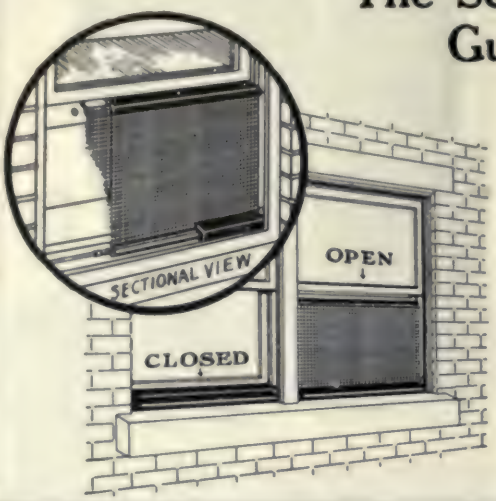
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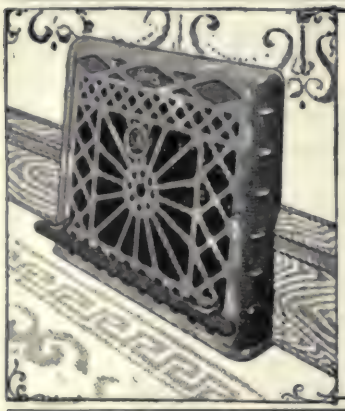


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It tells you what you should know in a manner that will enable you to grasp quickly not only the usual essentials and secrets of beautiful home making but it teaches also the various rules, elements and general principles upon which all good architecture is based. The author in preparing this book has drawn, not only from his long personal experience, but has also consulted many other noted authorities, whom he quotes frequently, thus giving you the benefit of the experience and knowledge of those who by reason of their training—of their intimate knowledge of all that has been done in the past, has fitted them to wisely counsel you—enabling you to achieve effects otherwise impossible.

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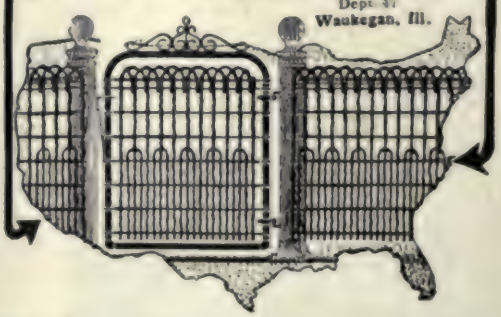
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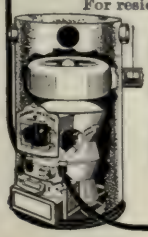
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ON HOME BUILDING

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IDEAL HOMES MAGAZINE

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A MISTY APRIL MORNING.

KEITH'S MAGAZINE

VOL. XXVII APRIL, 1912 No. 4



(No. 1.) THE BROAD EAVES SEEM IDEALLY COOL AND SHELTERING.

The Chalet Roof

By MRS. KATE RANDALL

SINCE the advent of Malthoid and Rubberoid roofing, the chalet roof has become immensely popular. The broad eaves seem ideally cool and sheltering for a warm climate, and are very satisfactory if sufficient space is left for a free circulation of air under the roof, for, of course, attics are out of the question. The houses illustrated are good examples taken from a dozen varieties of this style. All of them are shingled to the ground with redwood shingles, either stained or simply oiled with a tint of color added, either gray or green. All have white trimmings. The stonework in No. I is excellent, being of selected boulders, light and dark. No. II has concrete chimney and porch pillars. The brick work in No. III is of fine red brick and in this connection we are reminded of similar brick work we saw in England, where the bricks were exceedingly small. The effect was unique and might well be imitated by our own brick makers. In the same old house the chimneys were built diamond-shaped instead of square with the house. To return, however, to our own illustrations. Each

of these houses has some novel features inside. In No. III you enter a square hall with a small reception room at the left and dining room at the right. Back of the reception is the library. This occupies nearly the whole width of the hall and reception room, but does not connect with the latter. Broad glass doors open on a brick-paved porch at the back. A portion of this porch is glass enclosed, with windows that drop out of sight and



(No. 2.) QUAINT, BUT PICTURESQUE.

make this small room almost a part of the garden, and here "tea" is served in the cool of the afternoon. A real library takes the place of the usual living room, and is a rarity in these days, when everyone seems seized with the large living room mania, and guests are ushered directly from the street into the midst of the family circle. No wonder the art of reading is declining with the decay of privacy. But in this house the casual visitor is received in the most charming reception room. This is exceedingly dainty. The woodwork is white, and the wall covered with one of the beautiful new panel papers. The ground is a white satin and ceiling and frieze match exactly. In each roll of the white side wall, and below the picture rail about one inch from the selvedge, there is a narrow gray band, simulating a tiny moulding, and just below the picture rail an 18-inch border is put on, or to be more exact, a frieze is put on the panel. This matches so exactly that one needs a sharp eye to see the joining. It continues the little moulding and finishes the panel effect with scroll and garland, in which is a touch of pink.

The draperies in this room are, I believe, to be linen taffeta, in a chiné effect of indistinct flowers. The library wall is completely covered with book shelves to the height of six feet, and the wood is stained to imitate chestnut with a tint of green added. Either this combination or plain white seems to be the favorite finish just now. The wall above the bookshelves is hand painted in oil. Tan with a small conventional figure in green. The high mantel is faced with large tan tiles and the very high shelf is a solid slab of concrete with square brackets of

the same material and tinted to match the tile. The hall and dining room have the same woodwork, but the dining room is papered in mustard-like brown sunshine. The furniture is to be the new walnut, so there shall be no red shades in the wood to clash with the wall. In No. II the dining room is at the right, the whole depth of the house, on the left, being living room. The rooms are all connected with wide glass doors, curtained with soft white lace. The woodwork is rather dark. In the dining room the chief feature is the high mop board, being just the height of the low window sills. This gives a very quaint effect. The room has a high plate rail and below this Lincrusta Walton, in a soft brown, and above the rail a foliage paper with tempting peaches half concealed. The ceiling in both rooms has a square beamed effect—one large square—and at each corner very decorative electric lights. The living room is papered with a flock, dark green, with a thread of brown and black about four inches apart, making a stripe. This is finished just below the picture rail with a pretty panel. The frieze is very good—like a wide green field, not a line to break the perspective against a sunset background. The curtains in these rooms are of the pretty sundown, a sort of soft pongee, green in the living room and old rose in the brown dining room.

The bed rooms are all white, with dainty papers. One we recall was a pink and white-flowered stripe, frieze and ceiling plain white. Just under the picture rail was a pretty garland finish. These borders are charming. They do not seem put on, but a part of the side wall, so perfectly do they match. One other room had a plain tint used from the baseboard to a narrow chair rail, and above this is a chintz paper, but only a very little, not more than three feet, tiny sprigs and buds and blossoms. With mahogany furniture and white dimity curtains, this will be most old-timey and pretty.



(No. 3.) A SUGGESTION OF REPOSE.

In No. I the front door opens directly into a large living room. Back of this, at the left, is the dining room and a small den. The woodwork below has a finish with a slight tint of green, and as one

painter said, "I made a mistake and put in a little red, too." Anyway, it is very pretty. The walls are all oil-tinted to harmonize. On the second floor everything is white and dainty flowered papers. This is the day of "the disappearing"—screens as well as beds. The screens are built into the walls in some way, and the top of the screen is fastened to the bottom of the window sash, and as the window is raised the screen comes up and takes its place. The arrangement seems very simple and complete.

The same people make a wonderful disappearing bed, which is really absolutely perfect, with nothing folding or killing about it. One sees what appears to be a set of book shelves, or a sideboard, with cupboards below, some three or four feet high. You open this cupboard and there stands a low brass bed. It has the most wonderful ball-bearing castors and a child can pull it out and move it to any part of the room. The space which concealed the bed was, in this case, under a small bathroom, and one went up two steps into the bathroom. The space is perfectly finished and ventilated and the whole thing is not expensive. The kitchen and baths had no novel features. They were all in white and corresponded in every way with the other parts of these very charming homes.



A VERY PLEASING SWISS COTTAGE. —Lowell A. Lamoreau, Architect.

The Remodeled House

SOME most pleasing homes have been remodeled from dilapidated structures possessing certain good points which the architect was able to discern and turn to good account. This house stands on a quaint, old-fashioned street in an old New Jersey town, and is partly hidden by the trees. Originally the front door faced the street, and a long, narrow passage terminated in an ugly stairway. This arrangement was done away with and a new door was placed on the left hand side of the house opening directly into a large square living-room hall, a substantial portico being added which gave character to the structure. The main walls were all left standing, but the inner wall of the long passage was removed, adding an extra three feet to the size of the living room. The old staircase was left and the hand-rail, but the enclosing partition, which separated it from the hall, was cut away and replaced by square balusters made heavy and plain, running up to the ceiling, thus retaining the structural effect and yet making an open stair of a boxed-in one. This stair screen was still further accentuated by a square post, the full height of the room, and carrying with its pilaster onto the wall opposite a beam which likewise received the upper ends of the balustrade. The result was pleasingly open and yet clearly separating the stairs from the hall and giving a good stopping place for a commodious seat built across the wall under the balusters. At the foot of the staircase a door was made opening onto the piazza, the main addition to the house,



AN OLD-FASHIONED HOUSE, THOUGH REMODELED, RETAINS ITS QUAINT SIMPLICITY.



ENTRANCE PORCH.

which gave opportunity for a commodious bathroom and linen closet being built above it, and also adding very materially to the general appearance of the building. This piazza or veranda, which was to take the place of the old one taken off the front, was built with brick wall and posts, and such parts of its roof as were not covered by the bath room were made of heavy gears, the openings between the piers being closed in with sash in the winter, turning it into a little conservatory, with doors opening from the dining room and hall. The absence of the usual light wooden balusters and posts that so unfortunately enter into the construction of most verandas, and the use of substantial brick piers and walls, make this a part of the general building and give good support for the work above it. The original structure being only of frame and of the most primitive type, the architect decided that his home must be as comfortable in winter as summer, so the outside walls were entirely covered with sheathing quilt, and outside of this a coat of yellow Jersey sand and cement on lath was added. It is left with a rough, uneven finish, showing the tool marks of the trowel, giving a charming texture to the surface.

The placing of the veranda on one side of the house entered from the garden or from the interior, with the entrance porch and walk on the opposite side of the building, keeps the necessary visits of business, deliveries, etc., entirely removed from the family and its friends, and gives much more seclusion than could be otherwise obtained on so small a lot. The shrubs and flowering plants that are trained against the walls are an interesting feature of the place.

As may be noticed in looking at the



LOOKING FROM ENTRANCE HALL INTO LIVING ROOM.

plans, each room is the entire width of the house. The living room is papered with a soft blue with a tiny figure of a darker tone of the same color—a suitable background for the pictures and mahogany furniture with which the room is furnished. Above the bookcase the architect made some interesting plaster casts, which form an arch over it. The room is well lighted, possessing three windows; the appearance of the one long wall is broken by having a piano in that corner.



THE ADDITION CONSISTS OF A SECLUDED PORCH OVER WHICH A BATH-ROOM HAS BEEN ADDED.

Adjoining the living room is the hall; the woodwork here was of painted pine, but was scraped and stained brown and finished with wax, without luster.

Passing through the hall we come to the dining room, the floor of which is on a lower level than that of the two other rooms. As there was no bath room on the second floor in the original house, no provision was made for pipes being concealed in the walls and ceilings, but this difficulty was overcome by carrying the pipes up the walls of the kitchen and across the ceiling of the dining room. A casing of wood was then placed around the pipes, and similar casings, at regular intervals, were added, giving a raftered ceiling to the dining room. The walls are covered with brown burlap to the height of five feet, the upper side walls and the ceiling between the beams are papered in a warm tone of old parchment. The woodwork is a dull, warm brown, waxed. A spacious closet was made of the original entrance door to the room and a new, wide entrance, with double glazed doors, provided. The old door which led out from the dining room to the yard, and now opening onto the veranda or conservatory, had the upper panels cut out and filled in with glass, and a glass closet or cupboard was made by cutting out the partition that came back of the lower part of the kitchen dresser and fitting it with shelving and doors of leaded glass, with a mantel over it. This is opposite the entrance to the dining room and makes a pleasant feature when seen from the hall, being ob-

tained without the sacrifice of any room, by using the thickness of the partition. The sideboard, an old mahogany piece, of simple, good lines, was recessed into the space between the kitchen dresser and the new chimney, which it was thought expedient to build for the range. The

The second floor has three good bed rooms and a bath room. As the floors are old and rather uneven they are entirely covered with matting in summer and with rugs in cold weather. The bath room has modern fixtures of the best make and design.



dining room is one step down from the hall.

In the kitchen, which is fitted with all modern requirements, the principal change was made in turning a part of an unnecessary large shed into a refrigerator room and store closet and the building of an outside bin for the kitchen coal, to save the labor of carrying it from the cellar.

This little house is particularly interesting as a good example of what may be done with a small lot and a commonplace building without the expenditure of a large amount of money. To gain such results it is of course necessary for the owner to engage someone to help him who is trained to see and to use the possibilities that are generally present in most old houses and grounds.

Spring Planting of Hardy Shrubs

By TARKINGTON BAKER



AN OLD-FASHIONED HOUSE SOFTENED BY SHRUBBERY.

WHERE trees are planted on small city lots, in many instances a shrub would be of greater value, better effect and far more appropriate. As a matter of fact, the advantages of shrubs are too often overlooked or ignored. Tall-growing and dwarf, evergreen and deciduous, flowering from early spring to late autumn, there are few places where they will not succeed. They may be planted as individual specimens, as trees are planted, or they may be massed for dense and solid effects. The latter is the best use of them, but there are situations where the former planting is advisable and appropriate. The "mass" planting never fails to add harmony and beauty to a yard, large or small, and contributes to the unity of its plan of ornamentation. The wide variety in habit of growth, in foliage and in the flowers, gives greatest value to shrubs. They can be had for every situation. Whether tall-growing or low-growing kinds are wanted, whether spring effect, summer or fall effect is wanted, whether flower, fruit or foliage is the conspicuous feature to be observed, the shrubs will serve. They lend themselves to the masking of foundations, unsightly views and outlooks; they make excellent backgrounds for flowers; they break the contrast be-



A RHODODENDRON SIXTY-FIVE YEARS OLD.

tween flower borders and trees; they make excellent ground covers on steep banks, and they are equally serviceable in breaking dead levels. . Planted where it is desired that a walk shall turn or bend, they supply motive for the change in direction. And, no matter to what use they are put, once established, they require comparatively little attention.

If only seven shrubs were planted, it would be possible to maintain a succession of bloom from April to November. The list would include:

Forsythia, blooming in April.

Syringa (lilac), blooming in May.

Spiraea, blooming in June.

Deutzia, blooming in July.

Rhus (smoke-bush), blooming in August.

Hydrangea, blooming in September.

Hamamelis (witch-hazel), blooming in October.

While it is true that shrubs, when established, take very good care of themselves, they will be strong and vigorous only if they have been properly planted. In preparing for their planting, spade the ground to a depth of two feet at least and incorporate with the soil a generous quantity of well-rotted manure. When the shrubs are received, examine the roots carefully, trim off with a sharp knife all broken or twisted portions and set the shrubs at a slightly lower level than that at which they stood in the nursery rows. Allow sufficient room for the development of the plants, bearing in mind always the height at maturity. Group them by planting the taller-growing varieties in the rear and the dwarf sorts in front, but do not aim at too uniform an effect. Avoid as far as possible the planting of the shrub stock in straight lines, but do not go to the other extreme and plant in mechanical zig-zags.

Do not set your shrubs out after any

formal fashion—just so far apart, and in straight rows—as so many persons do. Formality should be avoided whenever possible. You will find them most satisfactory when grouped. That is, several plants so close together that, when well developed, they form one mass of branches and foliage. Of course they should not be crowded. Give each one ample space to develop in, but have them near enough to each other to touch after a little. In grouping shrubs, where several kinds are grouped together, one must be sure that he understands the habits of each, or results will be likely to be quite unsatisfactory. The larger-growing sorts must be given the center or the rear of the group, with smaller ones at sides or in front. The season of flowering and the peculiarity of branch and foliage should also be given due consideration. There must be harmony of general effect.



THE YUCA, A GOOD ORNAMENTAL EVERGREEN.

When planting shrubs, make the hole to receive their roots large enough to allow you to spread them out just as they grew in the nursery from which you obtain them. Many persons dig what resembles a post-hole more than anything else, and crowd the roots of their shrubs

into it, fill in carelessly with lumpy soil, tramp it down roughly, and call the work done. Done it is after a fashion, but those who want fine shrubs and expect them to grow well from the beginning will never plant in that way. Spread out the roots evenly and naturally. Cover them with fine, mellow soil, made quite rich, and settle it into compactness by a liberal application of water. Then fill in with the rest of the soil thrown out of the hole, and, if the weather is very warm and dry, spread some coarse litter over it to act as a mulch. Treated in this way, not one shrub in a hundred will fail to grow, if it has good roots. If your plants have come some distance it may be well to cut off the ends of the larger roots, that is, to simply clip off the dried-over extremity. Keep the roots covered well until you are ready to set out the plant, with a damp cloth or moss. Exposure to light and air will greatly injure them in a short time.

Of late years there has been a widespread complaint of failure with the favorite old snowball, because of the attacks of aphides. These little green plant lice locate themselves on the under side of the foliage early in the season. I have kept my bush in good condition by spraying with a home-made insecticide. I melt half a cake of ivory soap, add to it, while hot, a teacupful of kerosene, and agitate the two liquids until they unite in a jelly-like substance. I use one part of this mixture to eight parts of water,

The spiraeas form another group of shrubs especially adapted to planting in small city yards. The most popular species probably are S. Van Houttei, S. Thunbergii and S. prunifolia. The blossoms of these are white.

One of our best blooming evergreens, it seems to me, is too frequently neglected; I refer to the yucca. Yucca filamentosa is one of our most charming plants, hardy, vigorous, attractive in winter as well as in summer, beautiful in foliage and in bloom. It is not especially particular regarding soil or situation and, when planted in masses, makes an excellent showing.

Spring is the time to set out hardy ferns. So long as we have these, there is little excuse for barren corners in shady situations. Hardy ferns demand a cool, damp soil, but insist upon a well-drained situation.

Best shrubs for shady situations:

Mountain laurel, Kalmia latifolia.

Barberry in variety, Berberis.

Privet in variety, Ligustrum.

Dogwood in variety, Cornus.

Snowberry in variety, Symphoricarpos.

Sweet-scented shrub, Calycanthus floridus.

Slender deutzia, Deutzia gracilis.

Rough-leaved deutzia, Deutzia scabra.

Japanese quince, Cydonia Japonica.

Shrubs with variegated foliage:

Purple-leaved barberry, Berberis vulgaris, var. atropurpurea.

Dogwood in variety, Cornus.

Syringa, Philadelphus coronarius, var. aureus.

Weigelia, Diervilla rosea, var. nana variegata.

Shrubby Althea, Hibiscus Syriacus.

Most persons know the lilac only by its common name. They are surprised, therefore, when they encounter it in nursery catalogues as syringa. The shrub that is generally called syringa is a Philadelphus. Once this is understood—and it is far from being understood at present—perhaps there will be a greater use of the different varieties of syringa. At present we confine ourselves almost exclusively to the use of syringa vulgaris and its varieties—that is, the common lilac. But there is much value in S. Josikea, with large, wrinkled leaves and bluish purple flowers that appear very late. Other varieties, too, are valuable—S. Persica, S. Villosa and S. Japonica.

The 1912 Wall Decorations

By HENRIETTA P. KEITH

PROBABLY there has never before been offered to the public so much choice in beautiful and refined wall coverings, at prices which bring them within reach of even a limited income, as is shown in the spring stocks now opened. The possibilities for the decorator are endless, so many and so varied are the colorings, the textures and the designs. Added to these are the innumerable friezes and borders, some of them cut out, some producing that effect without being cut out and thus permitting graceful and delicate foliage and tendril designs. There are borders to use in connection with side walls in plain or shadow or blended effects, which are developed from the motif of the wall fabric and thus convey a feeling of great harmony and refinement. Prominent among these are the grass cloth effects, some in an all-over, splashy surface, some in shadow or two toned stripes of the general tone. With these come narrow binders in the same texture but introducing color in delicate mauves, rose, faint greens, dull blues. Some of these borders or binders are hand stenciled, both in floral and formal design. There are hand stenciled borders and friezes to use with the "Favrile Blends," or hand dappled effects for side walls. These "blends" are altogether new and very pleasing, and though no two yards of these goods are exactly alike, they match and blend and produce an even but varied texture over the entire wall. They come in very wide goods, 60 inches, and also in the ordinary paper widths; there is a quality at $1.25 a roll and a less expensive grade at 75 cents, this pattern being extremely pleasing. A "blend" of this kind has golden tans and browns for its main color tone but blended through this in an indescribably soft way are glints of rose and green. There are also several interesting landscape friezes, one of these—"The Berkshire Hills—being here illustrated:



One of the Crown Friezes That Does not Have to Be Cut Out.

The black and white of the photograph gives no idea of the exquisite coloring of this frieze, which has all the atmospheric effect and color quality of an oil painting. The sunlit openings of the forest, the shadowy, brown boles of the trees against the yellows of the sky and foliage, the green, grassy spaces of the foreground, are the perfection of wall paper art. This frieze comes in sections

60 inches long and 30 inches wide, each section costing $1.00. For a dining room about 12x15 feet, the cost would therefore be about $10.00—a mere nothing compared to the cost of such a frieze hand painted in oil and it is a glorious substitute.

There is a companion section, showing a vista of the distant Berkshire Hills in misty, smoky blues, through openings in the sunlit forest; this section may be centered over the fireplace or the openings, and the remaining spaces filled out with the forest sections, thus increasing the effect of hand work. Such a frieze is best combined with a high wainscot of wood, or of wood paneling. It demands dark, rich woodwork and oak furniture for its support, and would be appropriate for hall or dining room. On the other hand, there are landscape friezes in soft misty greys that are charming with a gray grancloth wall or one of the Favrile Blends in grays. Such a decoration would be delightful with ivory woodwork, mahogany furniture and rich blue rugs and hangings.

There are several new colors in the Eltonbury silk fibre goods, including mauve, gray and old rose, as well as gold and green, with particularly fine hand-stenciled frieze to match which can be arranged to form panels.

People who cannot afford the genuine burlaps in its many varied weaves, will be pleased with the effective imitations, which look almost like the real thing, though of course they do not give the wear or the protection to the wall.

The wide, French papers to match drapery fabrics are among the interesting features of the spring offerings. The paper reproduces the pattern and coloring of the fabric faithfully, being printed from the same rollers as the fabric. With these comes a wall "filler," which carries the chief colors of the fabric in some simpler design, such as alternating stripes of different widths. This gives the opportunity to treat wall and draperies exactly alike if it is desired, or to use a wall that is sufficiently plain to act as a foil for the draperies yet at the same time harmonizes perfectly with them.



THE BERKSHIRE FRIEZE—FOREST SECTION.

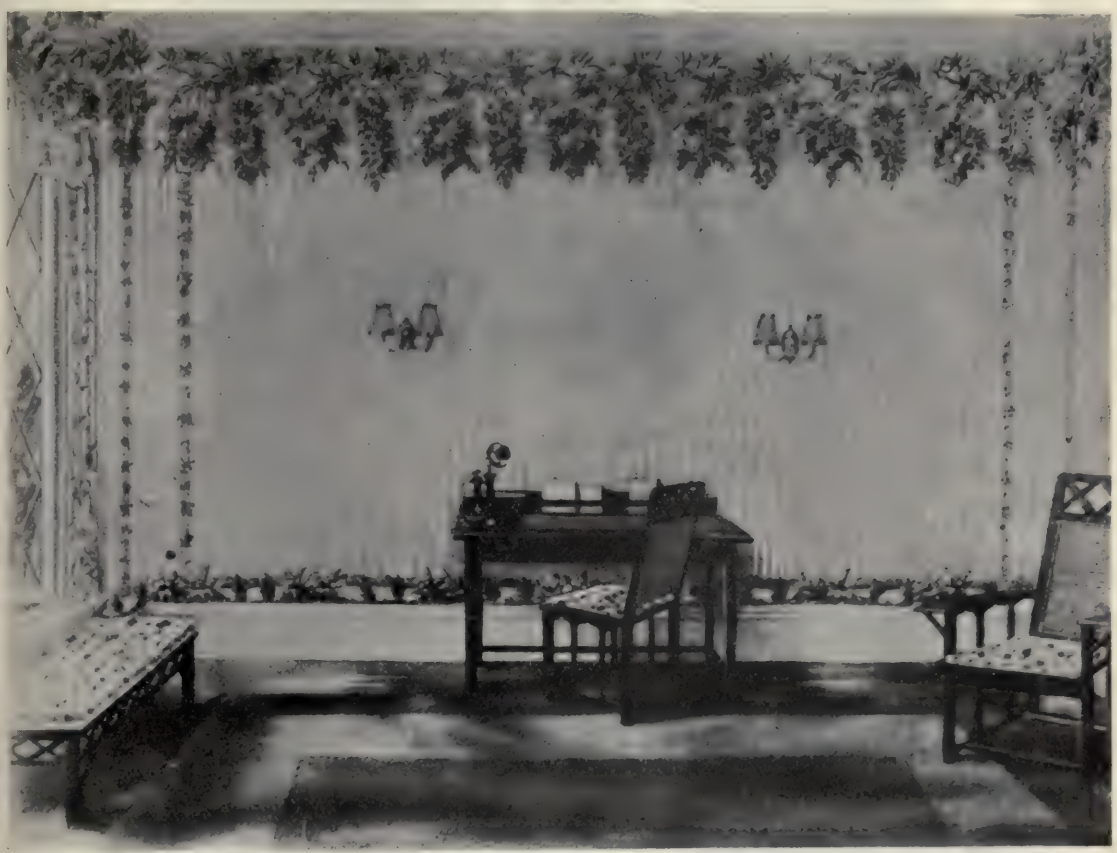
The very beautiful boudoir arrangement here shown, illustrates this harmony of fabric and wall better than words. The photograph is powerless to show the color beauty of the arrangement. The wall "filler" of faintly shaded pink, carries a narrow stripe of tiny pink blossoms strung together, which is used

as a "binder" to outline the wall spaces. In the illustration, a wide frieze border is used below the picture molding and a narrow, harmonizing, decoration just above the baseboard. This makes quite an elaborate decoration, and both of these borders could be eliminated, if a simpler decoration were preferred, and merely the narrow "binder" substituted.

The cretonne for the hangings and furniture coverings, is printed to match the narrow binder, and the foil of the grayish-green Shawmutt rug on the floor is excellent.

Mention has been made of the hand-stenciled borders and friezes to be used with the semi-grasscloth and other textile or fabric effect papers as well as the Favrile Blends. An interesting example is illustrated in a border in a semi-square effect with a Tudor rose center and Shand Kydd coloring.

The border shown is in softest browns, creams and dull red, and the wall filler below is a golden tan semi-grasscloth. This border is of special interest to those economically inclined, as it is a domestic reproduction at 15 cents a yard of the imported article at 45 cents. It must be confessed, however, that not many of our reproductions are thus satisfactory. They cannot for instance compare the exquisitely soft pastel coloring of a genuine Shand Kydd seen in the shops, the side wall a background of misty grays with a conventionalized design scattered over at



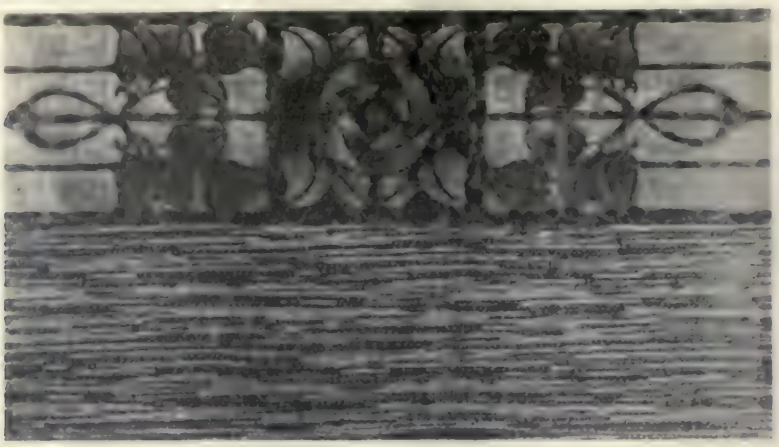
Courtesy of The Robert Griffin Co.

BOUDOIR ARRANGEMENT. THE ELECTRIC LIGHT SHADES ARE THE FAINT PINK OF THE WALL FILLER.

wide intervals in pastel shades of faint rose and green. The same coloring and design is repeated in a four inch straight banding to match. With this band come corner pieces and end pieces which

freshness of color contrast with light ground. They are excellent for upper halls or an upstairs sitting room or some bedrooms.

The present taste for the bright, cheer-



BORDER IN SHAND KYDD COLORING USED WITH WALL FILLER OF GOLDEN TAN GRASS CLOTH.

can be used to form a more elaborate decoration if desired. In stronger, more decided coloring such a wall would have a "spotty" effect, which is quite absent in these tones. The tone and tone pat-

ful colors of the English chintz designs is reflected in many pleasing patterns shown, in which the colors are so well distributed and broken into such small areas that though clear and bright they



Courtesy F. R. Beck & Co.
BORDER IN GREEN AND BROWN IN HAND STENCILED EFFECT.

terns in small all-over designs that come in domestic goods are widely useful for small rooms.

There are striped effects in Bulgarian embroidery on light ground which are particularly pleasing because of the

are not at all glaring. Such a background is often most harmonious with old fashioned black walnut or antique mahogany furniture. In softer colorings are many reproductions of French cretonnes.

There is the usual variety of cut-out friezes and dainty floral and ribbon arrangements so useful in panel work with plain or chambray grounds or shadow stripes. There is a broken line of black, edging some of the stripes, which on the whole rather adds to the effect when used with a border of stronger coloring. The black ground of some of the foreign papers, and floral festoons combined with a black ribbon, will not appeal to our American taste.

The showing of parlor and drawing room papers is in excellent taste. It includes hand prints on silk grounds of ivory, old rose and other delicate colors among which gray is a great favorite. Many beautiful medallion effects are seen, as well as the familiar French designs of graceful floral motifs. Many of these are suitable only for period rooms and for those who are interested in such decoration. We illustrate an unusually chaste and beautiful room of this character. The paper is a French pattern of exquisite coloring and design on pale gray ground. While such a room as a period room would be accurately copied by the few only, it is of general interest for the hints it affords on paneled decoration, a form of wall treatment which is the frequent subject of inquiry among our correspondents.



Designed and executed by White, Allom & Co., New York City.

DRAWING ROOM IN FRENCH STYLE—LOUIS XVI PERIOD—SHOWING USE OF TAPESTRY PANELS.

There are some rooms, where the frieze will not apply. These are "grand" rooms, that are finished with ornamental cornices—and rooms with very low ceilings. But with the present taste for plain, neutral walls, the frieze line is the only portion of the wall upon which we can secure any color or decorative effect. It must, of

course, be consistent in design and coloring, as the frieze, more than any one thing, may make or mar the room.

Our closing illustration reproduces as well as possible for black and white to do, a very rich and distinguished dining room decoration in which the greens and browns of growing things form the color scheme. The motif of the decoration is the grape. The purple clusters peeping from among rich golden green foliage and brown stems in the wide frieze which is carried beneath the cornice. A narrower, harmonizing band is used to outline the panels between the ceiling beams and the panels between the wood styling of the wainscot below, which are filled in with a plain grayish green Eltonbury, while the wall above the wainscot is hung with a small all-over tone and tone pattern in greens just touched with a faint line of black. The cretonne hangings at doors and windows reproduce perfectly the motif and coloring of the small "binder," while the frieze design reappears on the ends of the table or sideboard runners. The woodwork is brown oak as also the furniture, which is in the strong, Craftsman design demanded by such strong, rich coloring. The oak floor has a slightly greenish tinge to the brown stain, and the rug has a plain tan center with broad band of plain green for border.



Courtesy The Robert Griffin Co., New York.

DINING ROOM IN WHICH THE CRETONNE HANGINGS REPRODUCE THE GRAPE MOTIFF OF THE FRIEZE.

EDITOR'S NOTE.—This article will be followed in a near issue by a discussion of other methods of wall decoration, such as the flat-tone print finishes now brought to artistic perfection, and water color treatments.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

Adjoining Cottages Built on the Same Plan

By A. E. MARR

OCCASIONALLY there is need of two houses to be built side by side. Houses that need to be similar and yet just different enough to give to each an individuality. In such cases the building problem is intensified, but what is a prize worth which is obtained without a struggle, and the harder the problems the keener the satisfaction when the task is finished. It is with this problem of double construction that this article deals, and I shall endeavor to show by means of plans and photographs just what was accomplished and how it was done.

The houses were to be built side by side, must contain the same number of rooms, be similar in general, but not duplicates in any essential detail, except in the matter of cost, which latter point was to be the same for both. For purposes of identification, we will mark them cottage No. 1 and cottage No. 2.

Both cottages have mortised frames and sound construction, with the exterior walls and roofs of matched spruce boards covered with quilt paper, and then finished with best quality cedar shingles, dipped in stain and laid six inches to weather on walls and four inches to weather on roofs. All exterior wood finnish is clear pine, and this, as well as the chimneys and metal work, was painted with three coats best lead and oil.

Cottage No. 1 has a covered piazza extending across entire front and supported at corners by a series of three square posts with lattice work between, while two round columns serve in the middle. The rear porch is quite secluded by means of lattice work, the opening being in the form of an arch.

The front entrance, which is located apparently on one side of house, has a rather elaborate rounded roofing, and the dormer windows have the same rounding effect. Cottage No. 2 has a piazza which is roofed by the overhanging second story, this being supported by means of a series of square posts, with lattice-work effect. The rear porch is roofed, but otherwise quite open, except for the simple square posts and lattice. The dormer windows in this house are angular, and,



COTTAGE NO. 1.

to relieve a plainness of wall expanse, a simple balcony was added at one end of house on front.

Cottage No. 1 contains on the first floor three rooms and reception hall. The hall has a double floor, the lower being of matched spruce boards covered with two layers of building paper. The upper floor is of best narrow Western maple, selected for whiteness, and treated with one coat of oil and three of shellac rubbed down to a dull finish. The standing finish is whitewood stained a dark brown, varnished and rubbed down, and the



COTTAGE NO. 2.

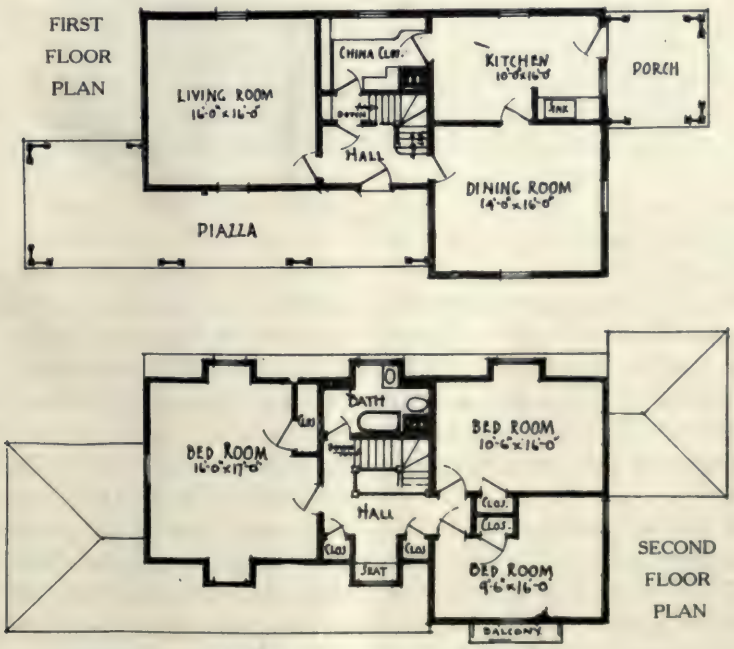


FLOOR PLAN COTTAGE NO. 1.

walls are covered with brown cartridge paper.

The parlor, which is located on the left of hall, is about twelve feet square, has floor and standing finish the same as hall, is papered with a light brown cartridge paper with white border, and has ceiling slightly tinted a delicate cream. Light and ventilation come from three windows.

The dining-room is twelve by seventeen (12x17) feet, with floor same as preceding room and standing finish of whitewood stained dark green, varnished and



FLOOR PLANS COTTAGE NO. 2.

rubbed down. The walls are covered with a two-tone striped greenish paper, and the ceiling in this room is tinted a delicate gray, just enough to relieve the harsh whiteness. Two windows furnish light and air, and a door opens onto the front piazza.

The kitchen is about eleven by sixteen (11x16) feet, has floor of Georgia rift hard pine treated with two coats of oil and two coats of spar varnish. The standing finish is of hard pine, varnished, and a dado four feet six inches high extends around room. The plaster walls are painted three coats. This room contains three windows. The balance of the service portion, including the pantry and entrance space, has floors and wood finish the same as kitchen.

Cottage No. 2 contains on first floor, three rooms and reception hall. The floors and standing finish in this house are of the same material as in the other one, but the whitewood being stained slightly different shades. The hall has woodwork treated an olive brown, and the walls are covered with plain paper to match.

The living-room, at the left of hall, is about sixteen feet square, with the woodwork stained same as hall, and the walls papered with a two-tone striped olive-green coloring. The ceiling is tinted and three windows give ample light.

The dining-room, on the opposite side of hall, is about fourteen by sixteen (14x16) feet, with its woodwork stained a dark green, and the walls are papered with plain cartridge paper of greenish tone. The ceiling in this room as well as the rest of the service portion has floors and woodwork the same as in the other cottage.

The second floor in cottage No. 1 contains three chambers and bath. The floors on this story are all of best quality selected Western maple, and the standing finish is whitewood painted four coats best lead and oil and rubbed down after each coat, the finish being two coats of varnish worked down with pumice and oil to a dull gloss.

The front chamber is about twelve by fifteen and a half (12x15½) feet, has wall paper of a delicate rose shade, ceiling tinted slightly warm, and contains closet and three windows.

The rear chamber is about nine and a half by sixteen (9½x16) feet, is papered with a light colored small figured design, has tinted ceiling and ample clothes closet, as well as two good windows.

The third chamber, located over service portion of house, is about twelve by fourteen (12x14) feet.

In cottage No. 2 the principal chamber is about sixteen by seventeen (16x17) feet, is papered with pink and white striped paper, has tinted ceiling, contains closet and has three windows.

The front bed-room, across hall, is about nine feet six inches by sixteen (9½x16) feet, is papered with a light blue design, has tinted ceiling, contains closet and two windows.

The third chamber is about ten feet six inches by sixteen (10½x16) feet, and the paper in this room is of cream tone with a small delicate pink flower. The ceiling effect has also been softened by slightly tinting, and the room contains a closet and two windows.

The cellars in both houses are finished much the same, with cement floors, and contain the usual coal bins, preserve closets and furnaces.

Both houses represent a remarkable value for money expended, nor does that tell the whole story, for the house builder today wants more than that. He wants a home, and both these structures represent cozy simplicity, breathe a spirit of ideal homeness, that indefinable something which completes the whole and repays one doubly for the expenditure of both labor and money.

Hints on Framing and Hanging Pictures

By ALICE B. MUZZY

THERE is a field of household decoration that is not sufficiently understood by the average person—namely, the correct treatment of pictures. This is unfortunate, for not only may a painting be injured by its own inappropriate setting, but in its juxtaposition with those of different tone and subject its effect may be entirely destroyed. A picture refined in color is ruined if hung against an inharmonious paper. Wall papers of large floral designs, stripes or tapestry, frequently make distressing back-grounds for either photographs or paintings; reserve these for your halls, boudoir or dining-room. Of course the ideal background is a plain color or one with a small, inconspicuous self-toned figure. The story is told of a room in Alma Tadema's house having a dull gold surface, on which he contemplated hanging pictures; but finding people so effective against it, he left the wall untouched. The color may vary according to necessity. Carbon photographs, Japanese or other prints, watercolors and pastels find their most agreeable setting on walls of delicate buff, warm gray, leather-color inclining to pink, and dull though warm blues. Rough plaster gives an artistic background.



CARBON PRINT IN WIDE WOOD FRAME WITH NARROW GOLD LINE.

Paintings in oil are effective against the richer tones of golden browns, tans and warm greens; red is more difficult as a background, although shades of burnt sienna are often satisfactory. Many persons dislike the terra cotta, so often found in galleries, for anything but casts; there nothing is more fitting. They find the pale, cool tints of greens and blues trying

to most pictures, whether prints or paintings. Where the surface color cannot be changed, white cheese cloth stretched tightly may be used for works of delicate coloring.

Considerable freedom as to framing is now allowable. A few years ago the dictum went forth that all carbon prints must be framed in wide, plain dark woods without mats. This is undoubtedly a safe rule, but it has been found that a tiny band of dull gold set between the print and wood is most valuable. It sets off the picture and at a distance is particularly needful; without this, the composition suffers, as the wood is so nearly the tone of the picture that the original boundaries are lost. A frame must always be thought of as a limit, we may say as a window-casing through which we see the picture, for, be it well understood, the painter has set his border just there, filling his canvas to a certain place.

The light mat is seldom desirable, except for unframed prints; far better is it to frame all pictures directly to their edge, be they oils or watercolors, etchings or prints. Many pictures, however, are improved by a wide surface between them and the mouldings of the frame, but this should be considered as part of it and resemble it. For instance, a gold paper mat may be used of the exact color of the gold frame; but is best made of the Japanese veneers, which come in the thickness of cardboard and are delightful in grain. This may be gilded or left of the natural wood, the outer frame being of the same wood or toned to match. Or, again, a charming effect results from treating mat and frame with dull bronze powders or oils, rubbed in, or off, the surface until only hints of soft color remain, carefully chosen to harmonize with the prevailing tone of the picture.



DRAWING ROOM WITH LONG PICTURE REPEATING THE LINES OF MAHOGANY SOFA.

These dull gold frames may be used

appropriately on any picture in color or monochrome, a carbon print being a thing of beauty so enclosed. The cheap gold frame is not desirable; in its meretricious ornament and glittering gilt it could not fail to hurt whatever it surrounds. And think of the breach of good taste in putting the hand-wrought picture into this obviously machine-made affair! Japanese prints if not left simply mounted on rice paper are seen to best advantage in the plainest and narrowest of grayish mouldings of natural finish; this is a frequently preferred treatment also for pastels and delicate watercolors.

After the pictures are satisfactorily framed, their hanging is next in order. Some rather definite rules may be laid down here. In general, pictures look best when their center is at the level of the eye, hung, that is, with the lower edge of the frame between four and five feet from the floor. The height of the walls in our houses determines this for us to some extent; walls of about ten feet from floor to ceiling look well with pictures hung at least five feet high, those of less height may have them considerably lower. This applies to pictures of rather large dimensions; smaller ones should be hung low enough to lose nothing of detail; it is well to err on the side of hanging them too low. Large pictures may be hung from the picture moulding by two cords, small ones need not show any cord. This cord may be made a decorative feature by using wire covered with a silk or worsted of the color of the wall, or a shade darker; if wire is used, I prefer silver to gold.

The shapes of frames is another determining factor in their placing; all rectangular forms being easily combined, but round or oval shapes requiring special positions over mantels, desks, and so forth. Important oblong pictures may be placed above sofas or other long pieces of furniture.



SHOWING PAINTING INSET IN WALL AND FRAMED BY WOODWORK.

Construction Details of the Home

Heating and Ventilation

THERE is a great diversity of opinion as to the best and most effective method of heating and ventilating. Each system has suffered because of incompetent installation. The item of design, both of the building and the apparatus, should be considered in making a selection to get the best results. If there is a popular prejudice locally in favor of a certain system of heating, it is well to heed it if the house is ever likely to be offered for sale.

The Hot Air Furnace

A compact house with rooms on two or more floors is easier to heat with a furnace than one requiring long horizontal runs of pipe to reach rooms spread out upon a large area.

The furnace is really a large stove enclosed in a galvanized iron casing, from which pipes are conducted to the rooms to be warmed and ventilated. Each room should have a return pipe back to the furnace to insure a proper circulation of air. Fresh air is taken in from a window on the exposed side of the house, or in some cases on two sides, by a galvanized iron duct connected at the base of the furnace. This is the method most in vogue at this time. The furnace is set directly upon the floor and the duct connected above it. Formerly, and it is still good practice, the duct was made of tile pipe with cemented joints, carried below the floor to a pit beneath the furnace. A slide is provided to regulate the amount of air admitted. The opening should not be located where dust or odors will reach it and should be protected with a coarse screen.

Return pipes should be located upon the cold outer walls and it is usual to place the register face in position, connecting with the space between two studs, which forms the duct as far as the basement at which point it is continued by pipes to the furnace.

In some furnaces these pipes are collected on either side and open into large water pans which precipitate all dust carried by the return pipe and supplies moisture to the air constantly. Many people neglect to fill the pans and it is a good plan to pipe over to each pan from the hot water coil with a shut-off, making it an easy matter to keep them filled.

All pipes should run as direct as possible to the rooms they are to supply or vent and with as few sharp turns or angles as possible. The furnace and hot air pipes should be covered with asbestos and the joints of all vent pipes. Where the pipes enter partition a very tight and careful joint should be made with the surrounding material to prevent gas from going up outside the pipe and escaping about the sides of the register face into the room. It is not likely that gas gets direct from the furnace into the heating pipes in a good furnace carefully installed, but very often it finds its way from the basement to the rooms above when the fire door is opened.

Smoke and gas is not supposed to puff out into the basement if the furnace is properly handled but if it does a very satisfactory solution was made in a given case. A wide hood was built as low down over the fire door as was practicable and tapered up to a pipe with a damper. This

was carried back over the furnace and joined the smoke pipe near the chimney. When the fuel was added the damper was opened and all gas and smoke passed up into the hood and to the chimney. On the same furnace was another hood near the floor, with a damper, under which the ash pail was set. This connected with the first pipe and carried off all the dust which arose, when ashes were thrown into the pail from the shovel. Although there was a direct connection with the smoke pipe, neither of these pipes made any apparent difference in the draught.

Quite often furnaces are installed without the fresh air duct but in such cases returns should be located near outside doors that fresh air may be admitted occasionally when a door is opened.

Oxygen is absolutely necessary to get the best results in heating and must be supplied in some way to the air in the house. Much is supplied by leakage about windows and doors, so that the interior system as it is called is often quite satisfactory.

The bath room, kitchen or a room occupied by an invalid should not be vented back to the furnace because the air from there would then be distributed over the whole house. Separate ventilation pipes should be constructed, connecting with a vent stack or with the main smoke flue near the top.

Chimneys are often built with a round tile smoke pipe contained in a rectangular brick flue, the space outside the pipe forming an excellent ventilating flue.

Register faces are best placed in the sidewalls because dust from sweeping does not so readily find its way into them and the heat is distributed quite as effectively.

Hot air cools quickly and the furnace needs more attention to keep the desired temperature. To offset this it responds quickly when the house gets cold which is a decided advantage.

Combination Hot Air and Hot Water

This system provides a large coil above the fire from which pipes are run to the radiators. Short runs of furnace pipes do not act as well as longer upright pipes so it is well to place the hot water radiators upon the first floor and in rooms that are at a considerable distance from the furnace. The use to which a room is put should be considered also and in some both hot air and hot water may be used to advantage.

This would seem to be an ideal system on account of the opportunity for ventilation, the distance to which heat can be carried and the fact that hot water retains its heat so much longer than hot air alone.

The furnace should be located near the center of the space occupied by the registers and a little nearer the side from which the winds come in winter time.

Steam Heat

Less radiation is required for steam heating than for hot water heating and effects quite a saving in the comparative cost.

The water must be brought to the boiling point before the system becomes effective and the steam condenses very rapidly if the fire is not kept at, leaving the house cold.

The radiators are much hotter than for hot water and this effect upon the air is not desirable.

Explosions of gravity heating plants are quite rare being caused only by gross carelessness.

Each plant should have an indirect radiator supplied with fresh air from outside discharging it into the front hall or other effective place where it will be generally circulated.

Steam heat is said to give specially good results in the coldest weather and uses no more fuel than a hot water plant.

but in moderate weather will use more to keep up steam. Economy of fuel is a matter largely in the hands of the operator of the plant.

Hot Water Heating

No system is quite so popular at the present time as hot water heat for residences. The open-tank system is mostly used and with no valve on the expansion tank, cannot possibly explode unless the expansion pipe freezes which is not likely.

The radiators contain more sections than for a steam plant but the pattern is the same. The hot water being much cooler than steam, the air coming in contact with the radiator, is tempered without taking all the life giving elements out of it.

The heat can be controlled by the fire or by the valves on the radiators and the radiators will give off heat when the water in the boiler reaches a temperature of 100°. This means that only coal enough is required to bring the water up to 100° while with steam heat, enough must be consumed to reach 212°, the boiling point, before it will begin to give off heat. While the water may become much hotter than 100° yet it is evident that there is a saving in coal.

Hot water remains hot for hours after the fire has gone out, depending upon the temperature outside. In like manner it does not get hot as quickly as hot air or steam.

It is perfectly noiseless, there being no snapping or gurgling noises.

In the installation of either steam or hot water care should be taken to have the pipes of proper size, properly graded and run in the most direct manner.

Pipe covering of good quality will effect quite a saving in fuel. Radiators should be set where the exposure is greatest.

Two small radiators set at advantageous positions in a room will be more effective than one large one.

Special patterns in radiators are provided to go flat upon walls or ceilings where economy of space is required as in bathroom, etc.

Indirect radiation should be provided for the hot water plant as in the steam plant.

Heat Control

Each heating plant, either furnace, steam or hot water should be provided with a good thermostat.

This is a device consisting of a thermometer, a motor and batteries. The thermometer is set in the living room, or any desired position and an indicator is set at the temperature most satisfactory, usually 70°. If the mercury goes below 70° the battery releases the motor in the basement and it regulates the draughts automatically. As soon as the mercury again reaches 70° the motor reverses the position of the drafts preventing the fire from raising the temperature above this point. So delicately are they constructed that, when properly adjusted, a single breath from the body will cause the motor to act, only to re-act a moment later when the effect has passed away.

Day and night the regulator will hold the temperature at the degree set, provided the fire is well kept. A clock attachment may be provided that will turn the indicator higher at any hour set, if it is desired to maintain a lower temperature during the night, or at any time.

The motor must be wound up and occasionally new batteries are required at an outlay of 50 cents, otherwise repairs are very few in a good instrument. Where there are small children to consider or it is desired to keep an even temperature without further trouble, a heat regulator will be of the greatest service.

Specifications

No specifications are outlined for any of the systems enumerated because it would be impossible to give exact instructions to fit all conditions and makes of apparatus.

It is usual for heating contractors to submit specifications with their bids, which should go quite fully into detail.

In any system the size of the fire pot should be considered and the general size of the furnace or boiler.

With a sectional house boiler, no good idea of its size can be obtained from the size of the fire pot, because a section may be taken from the boiler or added to it.

The size of the mains is important and the location and size of the radiators. See how much radiation is figured by each contractor in the aggregate also if the radiators are of standard height. Sizes other than standard cost more and in some positions will be more satisfactory. Note the kind of valves to be used and any special features mentioned.

By a comparison of all the bids a good idea may be obtained of their relative value, other than the sum total in dollars and cents.

See that the accepted bid guarantees to perform the work in accordance with the specifications and that the plant will be of ample capacity to maintain a temperature of 70° in the rooms heated, when the temperature outside is at the lowest point that is usually reached in your locality. It is not uncommon to state this at 40° below zero, in our most northern states.

Hot water for the plumbing fixtures is supplied by a coil in the firepot. Have a definite understanding as to who is to furnish and install the coil, the plumber or the heating contractor.

Employ a reliable man, handling a boiler or furnace of established reputation, and who knows his business.

Fireplace Heating

The fireplace is very acceptable in the cold days of the year before the heating plant is started and by the use of devices in connection, it is possible to warm rooms upon another floor.

The mantel about the opening with its shelf may be very plain or very ornamental. It is possible to purchase a really good design in any desired finish to fit any room of the house.

The brick and tile available for hearth and facing are among the most artistic things that go into the home.



Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 327 CARL GAGE, Minneapolis, Minn.
B 328 C. H. BECKEL, Minneapolis, Minn.
B 329 A. M. WORTHINGTON, Albany, N. Y.
B 330 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 331 JOHN HENRY NEWSON, Cleveland, Ohio.
B 332 GLENN L. SAXTON, Minneapolis, Minn.
B 333 KEITH & WHITEHOUSE, Spokane, Wash.
B 334 F. E. COLBY, Sioux City, Iowa
B 335 ARTHUR C. CLAUSEN, Minneapolis, Minn.

Design B 327



IS there any kind of material that can be applied to the exterior walls of a residence that has become so popular as cement plaster or "Stucco," as it is often termed? In our opening study for April we have an example of this rough cast work applied to a residence of the simplest type, designed by Carl Gage, Architect. Note the low broad sweeping roof and cornice, the plain simple lines of the trim, and yet how rich this design really is. The perfectly plain walls without plaster ornaments of any kind extend to the base or water table which is of paving brick; not even the sash are broken by small wood or leaded divisions. Simple and yet how striking; truly a house with character.

The floor plan will appeal to one looking for something unique in a moderate priced home. One enters at the grade off of a brick terrace into a little entry and den, both being on the same floor level, or by going up four steps, you reach the living room which is of good size, 13'-9"x22'-0". It has a large window seat in the front and a generous fire place opposite. At the end of this room is a French window opening onto the sun porch. On each side of the French window are book cases with high windows above. The dining room is fair size. The kitchen is complete with built in cupboards, large sink, etc.

The cellar stairs lead down under the main stairs to a full basement, equipped with laundry and hot water heating plant. On the second floor are three chambers, each provided with ample closet space. A large bathroom and sleeping porch complete an ideal arrangement. The interior finish consists of hardwood floors throughout, with oak or birch standing finish in the main rooms, white pine painted for the chambers. The foundation size is 30x32 ft., exclusive of the sun porch. Estimated cost complete about $4,300.

Design B 328

In quite marked contrast to the preceding cement house, our next study is that of a most artistic cottage, stucco finish for the exterior walls. The pen and ink sketch is very cleverly rendered and we believe that there will be a number of our readers who will find this design the house of their ideals.

The interior arrangement has a decidedly unique feature in the sun room, which is placed at the front of the house and opens off the main living room extending across the entire width of house. According to the plan, this sun room is reached from the living room through French windows.

The double dormers front and back, secure splendid chambers on the second floor, with plenty of light. The cottage stands about 26x35 ft. on the ground, not including the projection of kitchen and rear entry, and built with hardwood trim for first floor, pine finish second floor, stucco exterior, installing a hot air furnace, the estimated cost is placed at about $3,400.

Design B 329

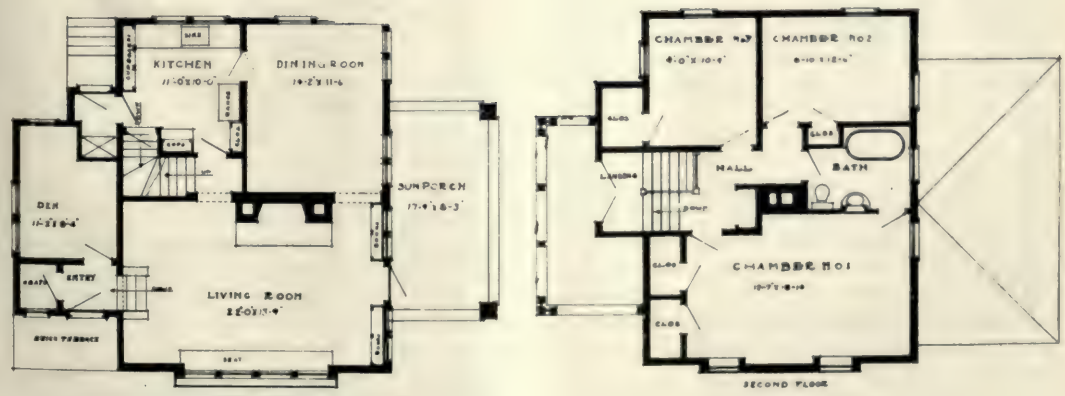
Our third study is also a cement house of an entirely different type from the two preceding houses. The gabled roof construction makes the house well adapted for stucco finish. The outside chimney is constructed of common brick and is cemented over.



—Carl Gage, Architect.

A Clean Cut Design in Cement

DESIGN B 327



This is quite a small cottage, having but three rooms on the ground floor, the entire front half of the house being devoted to the living room from which the main stairway leads. The living room is furnished with a fireplace with built-in bookcases on each side.

The intention is to finish the interior throughout with pine to paint. There is a full basement with laundry equipment and a hot air furnace and the architect estimates the approximate cost to build complete at $2,750.

Design B 330

A shingled exterior is always in favor and in this design we show a substantial home made very effective by using red cedar shingles over the entire building, both walls and roof. The lines of the design are particularly good and give that broad sweep to the cornice which strengthens the design greatly. Two-thirds of the front is occupied by terrace; the foundation is brick. Note particularly the detail of the window casings and the glazing of the upper sash. The windows are broad and set symmetrically on all four sides.

The central entrance with doors opening on each side and the very desirable feature of dining room planned in front, makes the interior a pleasing arrangement. The staircase—a wide one—leads to a landing two-thirds of the way up and then returns.

There is a full basement with a high grade warm air heating plant installed. The interior finish is oak, hardwood floors; second floor rooms are finished in pine or cypress to enamel. It will be noted that the picture of this house was taken shortly after it was completed as it is bare of shrubs and vines which add so much to the artistic appearance of the home. As built, it is estimated to cost about $8,000.

Design B 331

A delightful little bungalow where resawn lap siding has been used for the walls with shingled roof and inexpensive rough brick for the construction of the outside chimney. It is an exceedingly inexpensive and modest little home of five rooms, there being but one room on the second floor, or attic.

The plan, as originally laid out, really contemplates but one bed room on the first floor with the single chamber on the second, but by projecting a dormer at the front, a third bedroom could be secured. The interior arrangement is compact and cozy.

The ground dimensions are 27x34 ft. A basement is contemplated for a furnace and with inexpensive interior trim, such a cottage should not cost to build much over $2,000.

Design B 332

An issue of the magazine would hardly be complete these days without showing a design for a bungalow, the type of modest and inexpensive home which is so much in favor these days. We have in the accompanying design, B 332, a very practical plan. The first floor plan only is shown. Rooms could be finished off in the attic if desired, as the house contains large dormers and will give good light to bedrooms on the second floor. Narrow white pine siding is the material used not only for the house proper, but on all of the porch work. For the foundation, four course concrete block work above grade and below grade, the basement wall is of poured concrete.

Entrance is made directly into living room and for those who so much desire a den, here is splendid arrangement of rooms. Practically no space is wasted in halls and the bath will be found conveniently located. A furnace with modern plumbing is contemplated and the interior finish is white pine throughout being stained a tobacco brown in all rooms excepting the chambers where the finish is white enamel. Exclusive of porch, foundation is 27½x35 ft. Estimated cost to build, $2,900.

Design B 333

This is in reality the "home for two" which is the ambition of so many young couples who have not yet accumulated the funds to build a mansion and yet want a home of their own. It is a very complete little house with its fireplace, ample closet room, bathroom and built-in kitchen cupboards. The little porch off the bedroom could be readily enclosed, if desired, to give a sewing room, or glassed in to form a sun room.

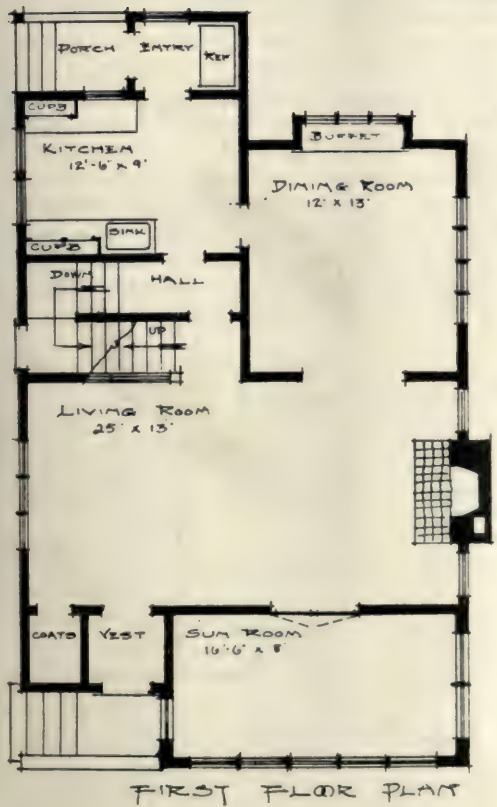
The combination living and dining room has become quite a common ar-



—C H. Beckel, Architect.

Well Rendered Study for a Cement Cottage

DESIGN B 328



FIRST FLOOR PLAN



SECOND FLOOR PLAN

rangement, but if a dining room is desired, the present kitchen could be used as such, placing the kitchen right back of its present location and throwing out a porch beyond the house line. A few feet of such a projection could be added to the kitchen space if it were thought too small. With such an arrangement the bathroom would be moved to accommodate the cellar stairway.

The exterior, while simple, is of very homelike design and is wholly in keeping with a house of this cost and size. Approximate cost, $1,500.

Design B 334

An exceedingly interesting home where the exterior has been treated with shingles excepting the porch which is brick, with stone trim. The porch rail being in the nature of a broad flat stone ledge, making a splendid seat. The roof overhangs with exposed rafter ends and, in addition, there are just the right number of ornamental brackets to look well. Attention is called to the lattice effect in the upper window sash throughout. The entire house strikes one most agreeably and as a home of harmony.

The interior arrangement is interesting and shows a great deal of care in its planning. One pleasing feature is the breakfast porch or what is so often called a sun room, an ideal feature to have in any home and a room to use during the summer months. There are four chambers besides sleeping porch, with space on the third floor for an additional good size room.

A little explanation with reference to the rear entry might be helpful. The place that is marked "entry" leads down to a grade door and then on down to the basement which extends under the entire house and contains a hot water heating plant, laundry, vegetable cellar, fuel bin.

This house is considerably wider than deep, being 39 ft. across the front exclusixe of the 12 ft. porch and 23 ft. in depth. The approximate cost to build, including hardwood finish and floors would be, complete, $7,000.

Design B 335

Taking up the last design of the series this month, we present a study of Architect A. C. Clausen, whose work is always interesting. It is a home designed with a special view of having plenty of sun light in all rooms. This is secured by there being no porch at the front, but the porch leads off of the side of living room. Access to same being through French windows at side of fireplace. This arrangement gives free light at both ends of living room and unobstructed light in the dining room which is directly across the central hall.

Three good size chambers are obtained across the entire breadth of house. The rear corner rooms being devoted, one for maid's bedroom and the other corner for a commodious bathroom and linen closet.

The exterior is treated in shingles and the porch columns are unusually heavy and add much dignity to the character of this design which is one that is sure to find favor with many of our readers. The cost complete to build, with hardwood finish lower floor, hardwood floors throughout and pine finish enameled on second floor, is placed at $5,500.

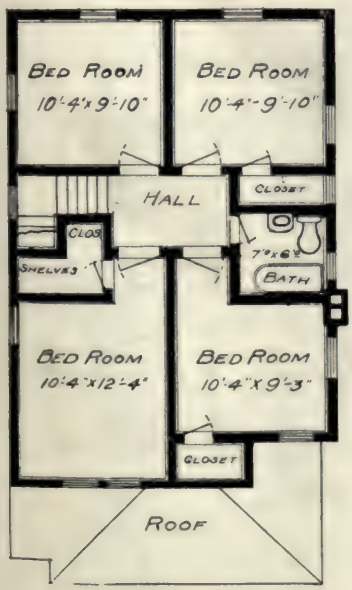


—A. M. Worthington, Architect.

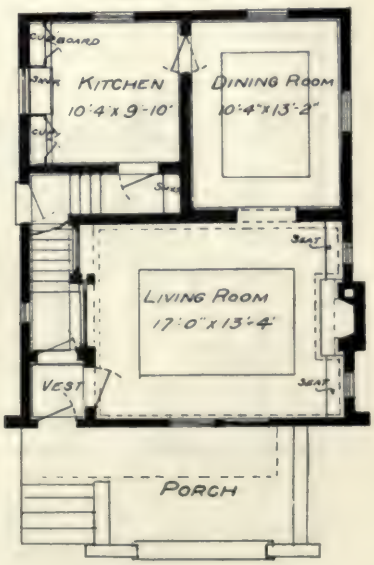
An Inexpensive House in Stucco Finish

DESIGN B 329

First Floor Plan



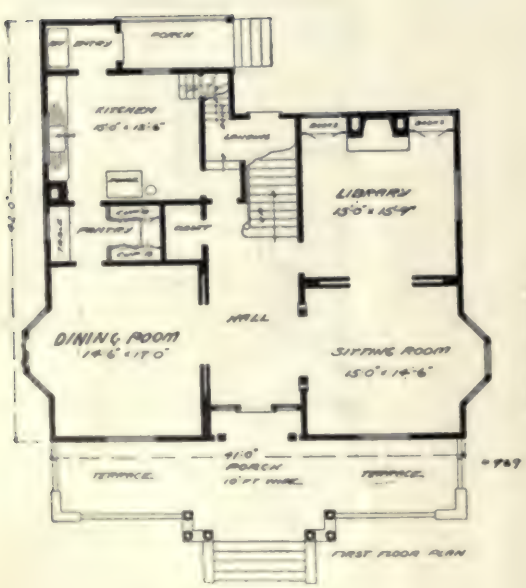
Second Floor Plan





A Most Substantial All-Shingled House

DESIGN B 330



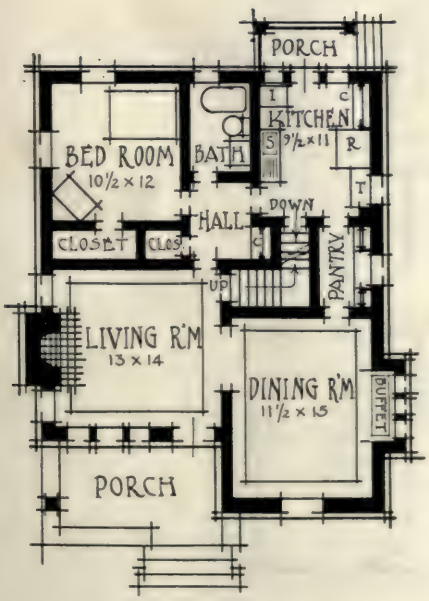


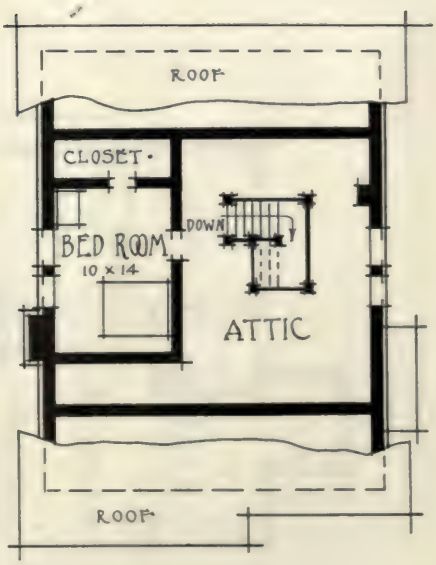


—John Henry Newson, Architect.

A Modest Two Thousand Dollar Home

DESIGN B 331







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—Glenn L. Saxton, Architect.

A Bungalow in White Pine Siding

DESIGN B 332

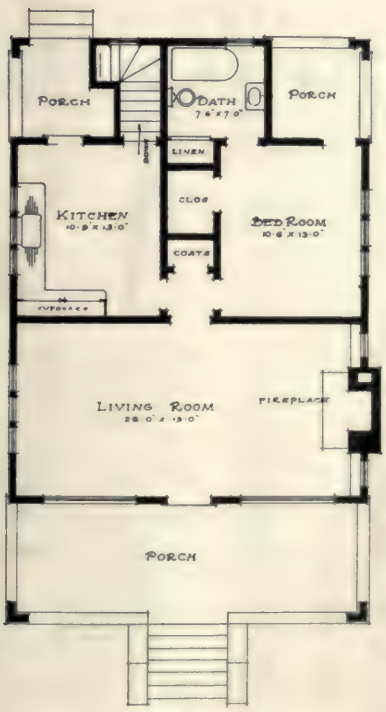




—Keith & Whitehouse, Architects.

An Ideal Little Home for Two

DESIGN B 333



FIRST FLOOR PLAN

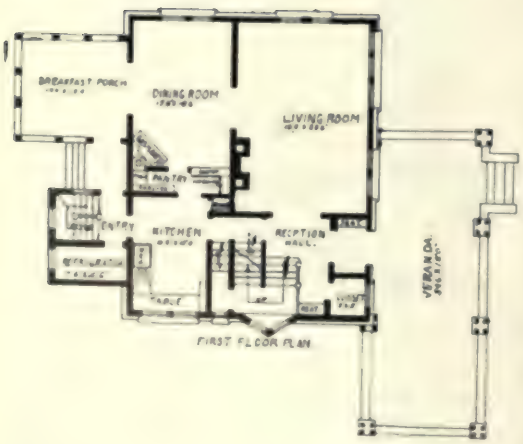
Keith & Whitehouse
Architects

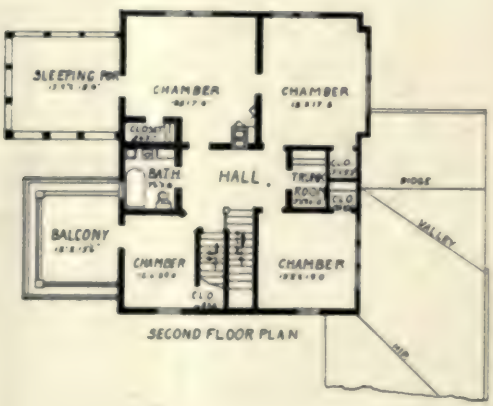


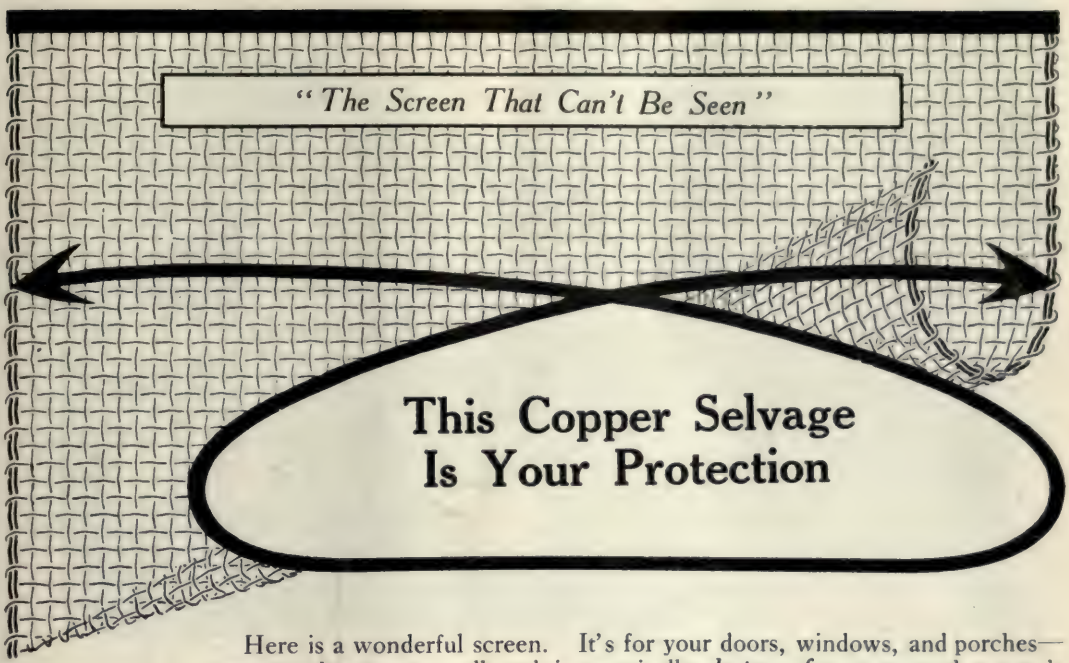
—F. E. Colby, Architect

Combination of Shingles and Brick in Artistic Effect

DESIGN B 334







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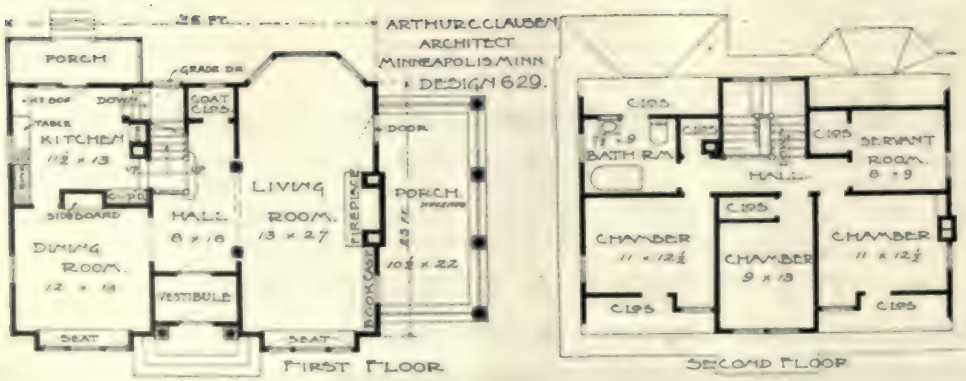
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—Arthur C. Clausen, Architect.

Semi-Colonial Design with Broad Porch at End

DESIGN B 335



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The Furnishing of the Country House.

THE WRITER is sure that very many of her readers are engaged at the present time in the agreeable occupation of planning for the furnishing of a country home, a seaside cottage, a mountain bungalow, or one of the reclaimed farm houses, which are becoming so delightfully common. She wishes that she might help them to avoid making some of the common mistakes which arise from the lack of forethought, or from an imperfect appreciation of the real needs of country life. We are all too prone to transfer our city scale of needs to the country, and then to wonder that we are not satisfied. Or else we rush to the opposite extreme and are quite certain that we shall need none of the ordinary comforts of life, which we assume will be a perpetual sitting out on piazzas.

Now as a matter of fact the conditions of comfort are much the same in city and country. Shade from the heat of the sun, artificial warmth when needed, a good light, a sufficiency of nourishing food, comfortable sitting and lying places, all these are as esssential in the country as in the city, and it is the lack of them which makes a summer vacation more exhausting than restful.

But there are certain proprieties which should govern the selection of the furniture of the summer home, quite aside from the matter of comfort. Bright colors, heavily stuffed furniture, elaborate carvings, costly bric-a-brac and valuable pictures are manifestly out of place. They are a source of constant care, and are suggestive of the routine of life, rather than of its times of rest and recreation.

The ideal furniture for the country house is, of course, wicker, but good wicker furniture costs a good deal, and it may well be varied by a judicious mixture of wooden pieces in harmonizing tones. It may seem desirable to have all the chairs and couch of a living room wicker, but it is well to have wooden tables, while the average wicker desk is not specially convenient and does cost a great deal. The same thing is true of bedroom furniture, and certainly for the ordinary family the dining room is best furnished wholly in wood.

Electric light is of course available in sophisticated country places, but out of the question in small ones. Money spent in half a dozen good nickel plated, shaded lamps, such as are sold for a dollar and a quarter apiece in department stores, is well invested, as such lamps supply a fair amount of heat in chilly weather. Another thing very desirable to have, if there are not lamps enough to go around, is a supply of plumber's candles, and if they are kept in the refrigerator long enough to get thoroughly chilled before being put into the candlesticks, they will burn more brightly and last much longer than if used in their natural state.

The Problems of the Reclaimed Farmhouse.

When one buys an old farmhouse and makes it over it is usually with a view to occupying it for more than just a couple of months in the summer, and its fitting up has an element of permanence lacking in the strictly summer house. In the latter tinted walls may suffice, but it is worth while to paper the farm house, and the question of floor treatment becomes of importance in the chilly months of spring and autumn.

The structure of many old houses give them picturesque possibilities lacking in



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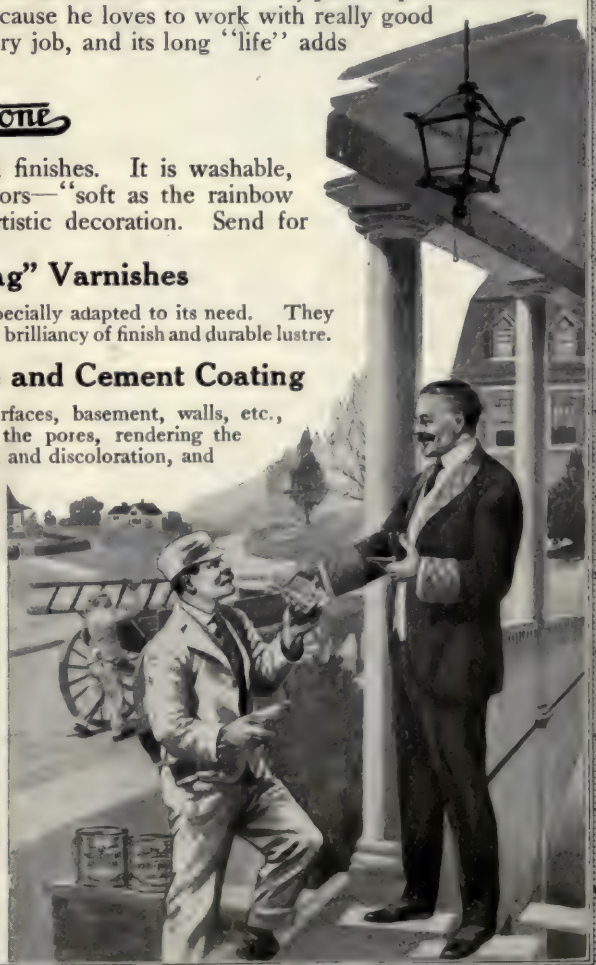
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a built-to-order house. It is sure to have nooks and corners and half high rooms, halls on two levels, abnormally low windows, or similar features, which it would never have occurred to an architect to plan for, all of which ought to be given their due value in furnishing. And with the emphasis of these quaint features of the old house there should be a definite simplicity of material and of decoration, not inconsistent with the sort of life peculiar to a rural community. If you cannot conceive of life without Oriental rugs and expensive furniture, buy or build a Colonial mansion, don't make a travesty of a farm house.

Simplicity does not necessarily mean rag carpets and unbleached muslin curtains trimmed with Turkey red, nor do we advise the construction of barrel chairs. But the rough and uneven floors of a farm house may very well be covered with a straw matting, which was probably the solution of the original owners. A dresser in the dining room is more in keeping than a modern sideboard, and a china closet with a mirror back and plate glass shelves would be decidedly out of place. You might very well have simple four-posters in your half high bedrooms, but you would choose dimity or scrim for valance and tester rather than a French shadow cretonne. Nor is mahogany furniture of the simpler sort to be tabooed, in fact, it is far more harmonious with the rural life of the past than oak of the Arts and Crafts order. Almost every housewife had a few cherished pieces of mahogany, a work table with leaves and drawers, a pillar table, a secretary, bookcase and desk in one, possibly a highboy, certainly a squatty rocking chair. The Windsor chair is distinctly rural, and so are the Governor Bradford chairs with their high backs of spindles with a projecting cross piece and the brace at the back of the seat.

After all, success in decoration is summed up in two things, simplicity and appropriateness. With these two points in mind you cannot go far astray

New Pieces in Wicker.

There is one New York firm which makes a specialty of waterproof, or perhaps it is weather-proof, wicker furniture, and one finds in their wareroom a great variety of unusual pieces. Most of this furniture is in the natural color, although it is possible to get it stained green at a slight advance on the figures for the natural tone. The finish is dull, and the green has a suggestion of weather worn bronze, something like the Pompeian tone sometimes applied to oak.

Of course there is a large assortment of the stereotyped pieces, arm chairs, settles, davenports and the like, and in all of the pieces the weave is of the simplest and the construction especially strong. The ideas of the shop are rather English, and there is a predominance of chintz and cretonne for cushions, where another manufacturer might use canvas or burlap.

There are triangular tables, with wicker tops, coming in pairs, so that when the two are fitted together they form a single table, about a yard square. These are most convenient for piazza use, when space is limited, as when separated they fit nicely into a corner.

Another space saver is the circular dining table, with four chairs exactly fitted to its edge, so that when not in use they slip under the table, with the upper line of their backs level with the top of the table. These are by no means cheap, the table costing $38.50, the chairs $6.50 each. The chairs are of excellent design and would be very pretty for separate use in a sitting room or bedroom.

For convivial occasions there is a drink table with a space in the center for three bottles, surrounded by rings for a dozen tumblers. Permanently attached to a low table this contrivance is $15.00. The upper part, fitted with a ring for carrying it about, can be had separately for $7.50. The useful muffin stand, known in England as the curate's assistant, in a convenient size, with three shelves, is $5.00. Of course there is the usual variety of tea tables, and a great number of trays with wicker edges and bottoms of glass over bright chintz. Particularly good ones have an edge of brown wicker and a thirty-six inch square of a chintz in which a gorgeous peacock is the central figure. These cost $15.00. Smaller sizes can be had at proportionate prices.

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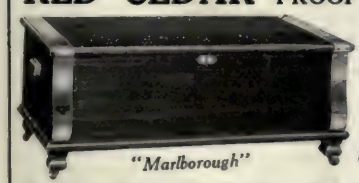
The sockets are permanent and driven level with the ground. This requires no skill. The sliding hook makes

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oil tank are $5.00 in the natural tone. A lamp four feet high, fitted for electric light, needing only to be connected, has quite an elaborate standard and a wicker shade, and costs $30.00. The shades of these lamps have small windows at intervals, so that the light is cast sideways as well as down. Closely akin to them is a high draught screen of wicker with an upper panel of stained and leaded glass, intended to stand in front of a lamp or of a gas burner, at ones protecting and diffusing the light.

The picturesque and comfortable hooded chairs come in different sizes and heights. One of very generous dimensions, both in height and breadth, is $25.00, and a smaller size, but quite large enough for most people, is $18.00. Chairs like these are primarily for out-of-doors, but have their use in the house for old or delicate people who are abnormally sensitive to draughts.

Matching Papers and Cretonnes.

The paper with a cretonne to match will always have a certain vogue, and it is possible to get very exact matches in imported papers and textiles. Among our own manufactures those of the Standish Mills are very exactly matched in borderings, intended to be used with a two toned white or gray paper.

Among the imported papers are the briar rose at $4.00 a roll, with a matching chintz at $1.50 a yard, 26 inches wide; the Barbizon, which has the effect of a confusion of rose red poppies and sage green foliage, irradiated by vivid sunshine, with the same design in a double width cotton taffeta at $2.50 a yard, the paper costing $3.00 a roll; a peacock paper is only $1.00 for an eight yard roll, with a choice of chintz at $1.75 a yard, or printed linen at $3.50, double width. There are two colorings in the peacock design, and there is a very similar one with birds of paradise.

These papers in their best use are for panels, set at intervals in a white wall, and surrounded by a moulding more or less elaborate, while the chintz, linen or cretonne is to be used with such discretion for coverings or as borders to a plain fabric. Although the price per roll, or by the yard, seems high, so little need be used that the whole expense is not great. Naturally materials with so much pattern are only adapted to rooms of large size, and to houses of a certain pretension. For the simpler house there are numerous and charming floral designs, in delicate colors, and of artistic quality at a less price.

Summer Curtains.

While in the long run the plain white curtain is the most satisfactory, there are many colored ones to be had, which are pretty enough to be a great temptation, even though one knows their certainty of fading. Certainly a colored curtain is more restful to the eyes in hot sunshine than white or cream, and looks a little more dressed up for a living room.

Most of the colored curtains are variations of Colonial scrim, with a stamped border on either side of the fabric, and often a small figure powdered over the center of the curtain, and the average price is twenty-five cents a yard. At a less price than this the designs are very poor, and a white curtain is a better choice. An exception is the old rose or green scrim, stamped in black, in imitation of the mercerized, sunfast fabrics which have often been mentioned in these pages. These are alike on both sides, cost about fifteen cents a yard, and would probably last out the summer in fair condition.

Before choosing curtains, it is well to look through the white goods departments of the stores. Marquisette and cotton voile make very good thin curtains and can often be bought for a song, or at least for much less than the price of the regular curtain materials. An effective way of using these plain fabrics is to set in a border of squares taken from the filet net sold by the yard. The effect is good and unusual. Choose a net with six inch squares rather than smaller ones. Some of these nets are accurate copies of heraldic designs, which have been used for many generations by the peasant women who make filet laces. In cutting out the lines of squares always reinforce the cut edges with a row of machine stitching. The edge can be turned over and whipped to the hemmed edge of the curtain. The same treatment is capital for bedspreads.



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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

H. M. H.—"Having remodelled my house as per enclosed rough sketch I desire assistance on finishing my hall and dining room.

My hall is 12x28-12 ft. walls. Dining room, 15x20—same wall. Exterior house bungalow. Hall will have stairway and the overhead is already nicely ceiled and hard-oiled. Dining room not finished on inside at all.

I will have beamed ceiling in both hall and dining room and will have 3½ ft. wainscot in hall, 6 or 7 ft. in dining room and this wainscot is what is troubling me. It is to be of fine figured white oak veneered panels, which I have bought "in the white" and desire to finish my dining room with it.

My impression is that golden oak finish, dark, would display the fine oak grain to better advantage than a weathered or flanders finish, and I expected to finish in golden oak, stain the window and door facings, and dropped beams, which are pine, to match the golden oak panels as near as possible, to use oak mantel, tan oatmeal paper on upper side wall and lighter shade for overhead between beams. To use yellow or buff tile under oak mantel, and have leaded art glass windows and electric chandeliers to match.

I thought of leaving the hard oiled ceiling in hall and using same golden oak finish on hall panels and facings, stairway, etc., and a different shade paper in hall on walls.

Now my whole objection to golden oak is that we don't like the golden oak furniture preferring the craftsman or mission and we do not believe same could be made to match the oak panels, unless the panels be finished in weathered oak.

Kindly give me your complete ideas as to how you would finish this hall and dining room."

Ans.—We would be sorry to see you finish your beautiful wood with a Golden Oak Stain.

It is a mistake to suppose that other finishes hide the grain of the wood. If stains are properly used they have no results of this kind. The trouble is painters insist on putting them on too heavy in the first place and then "wiping them off." Do not allow the painter to dictate in this matter.

We should advise for your dining room the fumed oak stain, or the brown oak, either one. It should be applied a little heavier on the pine than on the oak, to bring them nearly together.

With this finish you can use either Craftsman or Fumed Oak Furniture and these you can get in excellent finish and design.

Your general idea of wall treatment is very good, except that in the dining room, we think it deserves a better wall hanging than "oatmeal" paper, a light golden brown grasscloth would make it very handsome. With a 12-foot wall this grasscloth need not run to the ceiling angle, but the ceiling could drop down 18 inches with a moulding between. The ceiling should be deep cream. The fire place tile should be pale brown, not yellow.

The hall paper should have a figured indefinite design introducing color. A "Tiffany Blend" in green and blues would be excellent or an irridescent effect in coppery or greenish tones. There is a Tiffany thin material for hall windows to carry it out.

W. A. S.—As I have been a subscriber to "Keith's" for over a year, and received ideas therefrom to assist me in building in the spring, I wish to take advantage of your Interior Decoration department, which you so kindly offer to your readers.

The Beauty of the Home Is The Beauty in the Home



There is a keen pleasure in possessing beautiful woodwork. It gives refinement to the home. It is the setting that makes things look right—the tell-tale of the owner's taste and judgment.

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Enclosed please find stamp for reply. Also rough plans of house. Please suggest wall decorations for the various rooms, also your choice of woodwork.

Furniture in living room and hall dark, (oak) weathered; in dining room, golden oak; owner's bedroom, green weathered oak; northwest, light weathered oak; den, mission; sewing room, light weathered oak.

One 9 by 12 rug, and three smaller rugs, in warm tans, green, and a touch of red, in living room; a 9 by 12 tan and green rug in dining room; tan and green, 6 by 9 rug in hall; columned opening, 4 feet high (on sides) between living and dining room; no cased opening or otherwise between living room and hall; cream portieres between living and dining room, unless you suggest others. All rugs on first floor body brussels. Axminster 9 by 12 rug in bright reds, greens and browns in den. Den finished mission woodwork. Woodwork downstairs, i. e. living, dining, and hall, chestnut, birch, or cypress; which would you suggest, and how to finish. Border of floors in main living rooms quartered oak, varnished light. We had thought of a warm tan for the walls in the three living rooms downstairs, with a cream ceiling dropped 18 inches to a plain picture moulding. Casement windows throughout. Had thought of white cheese cloth without ruffles for same. They will open out. The house faces north."

Ans.—Inasmuch as the main rooms have a northeast facing, and the furniture is brown oak with rugs in tones of browns and green—we think your choice of a warm tan for wall coloring throughout, exceedingly good. We would suggest cream ceilings, but not dropped. The walls are too low for a dropped ceiling, and this effect is not so much in vogue as formerly.

If the low ceiling of living rooms were broken by an ornamental stucco moulding dividing it into three spaces crosswise of the room, it would add immensely to the elegance of the room.

The cream portieres we would have dyed a golden brown, and use brown furnishings in the hall, green in the living room. In the dining room, in lieu of the dropped ceiling, we would use a deep frieze to the tops of the doors, or lower, of paper in a close, all-over tapestry design of greens and reds.

In this room and in the hall, we would use thin net or silk for the casement windows, green in hall, red in dining room, but the cheese cloth, if cream, and fine quality, would answer in the living room. We think, however, that dividing the curtains on each window and finishing them with narrow one inch ruffles, would add much to their charm.

As the bedrooms have oak furniture, it would be well to run narrow oak molding round baseboard and casings of white woodwork. With such furniture the walls are best done in soft ecru or warm grey chambray papers with bright chintz curtains and furnishings.

H. B.—"I am putting up a concrete house of the bungalow type. Oregon pine T. & G. will be used for forms which will leave a very smooth surface inside, do you think these walls could be tinted like plaster and give satisfactory results? Is it advisable to put a cement floor in the kitchen."

Ans.—A smooth board surface can be tinted, but will not have the finish or appearance of a plaster wall. However, it might answer for an inexpensive cottage.

A concrete floor requires special treatment for the kitchen. Concrete is porous and will absorb grease, etc., also becomes very dry and dusty, unless specially treated.

The April '11 issue of Keith's Magazine under heading "Cement" gives valuable advice on this point.

L. M. A.—"I enclose a plan of some rooms on the upper floor of my house and would value the opinion of your expert on the subject, of decoration for the rooms. The house is situated on a residential street, where the houses stand about fifty feet apart. It faces the south and the front room is very sunny. The floor of the two front rooms are old floors. The floor of the back bedroom is maple and the furniture mahogany. Please tell me how to decorate and furnish the two front rooms and how to decorate the back bedroom."

Ans.—Presumably the woodwork of these rooms is painted white; the best



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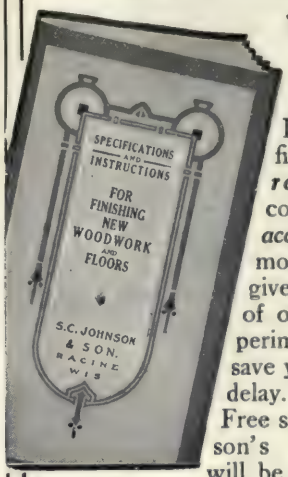
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No. 132 Green Weathered Oak
No. 121 Moss Green
No. 122 Forest Green
No. 172 Flemish Oak
No. 178 Brown Flemish Oak
No. 120 Fumed Oak

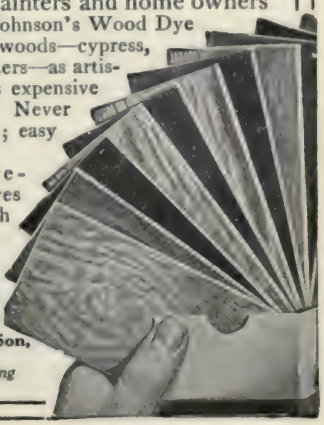
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thing to do with the old floors is to cover them with grayish-white plain Japanese matting, and upon this lay a couple of small rugs in the bedroom carrying out the wall coloring, one beside the bed, one before the dressing table.

A larger rug in the center of the room should be laid in the sitting room. As the room is long and narrow, it will be necessary to have a rug made to order about 9 by 14 of Lichen Green Wilton. We would do the wall in a gray grancloth paper, the gray having a tinge of green. Probaly the piano will be rosewood or mahogany and we would suggest a writing table and chair in the same wood as the piano. The rest of the furniture we would get in wicker, including wicker couch and Morris chair stained green, upholstering these pieces in English cretonne, in dull greens and mellow pinks, on a light ground.

One of the new wicker tables with wood top would be pretty. Have a wicker wall basket, filled with growing vines, etc. Let this room open into the bedroom done in one of the new fall papers called the Geisha, showing wall of small indefinite pinkish stripe with frieze of deep pinks and let the small rugs be deep pink.

A three-quarter mahogany bed with slender posts and mahogany dressing table, thin white curtains and white spread, mahogany small rocker and sewing table.

The main room can be effectively done in a rather strong paper showing plain bluish gray ground with far apart narrow stripe in dull blues and greens with a ten inch border to match at top of room. Rug in blended blues and greens.

V. M. G.—"Enclosed find rough sketch of dining and living rooms Expect to have fireplace, open stairway, beamed ceilings and column openings, between two rooms. Have mahogany furniture for living room, would like white wood work, mahogany trim for this room, but have oak (golden) dining room furniture, do not know how it would look opening into living room with that finish. I will have to use dining room furniture for a while, may change to mahogany later."

Rug for dining room is Oriental.

Ans. V. M. G.—If there is to be a columned opening between the two rooms the woodwork had much better be alike. We should ignore the present dining room furniture or else have it refinished, and treat the woodwork for future effect. We think a color scheme of tan, cream and greens would be best for the two rooms, with woodwork deep ivory, instead of white, mahogany doors and mantel and finish molding of baseboard casings, etc., of mahogany. The fireplace brick could be the rough surface, burned brick in green tones, the wall a soft ecru. The rug a blending of ecru and green. In the dining room let the green predominate. See description of dining room in Wall Decoration article in this number.

The floor stain can be given a slight greenish tinge or merely brown. As to merits of papered or tinted walls is a matter of taste and convenience. Sometimes paper is the only thing possible. Where the expense can be afforded, very satisfactory results are obtained by the use of the flat-tone paints for interior walls.



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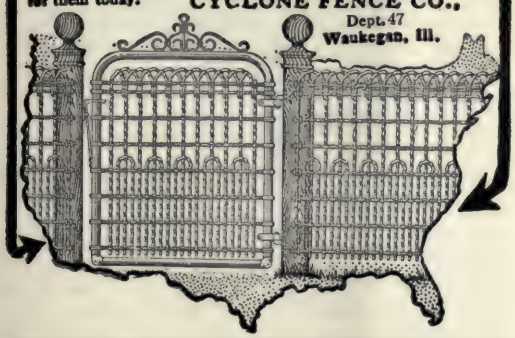
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The Conservation of Energy.

SOMEONE will say what a very imposing term to apply to housekeeping, suggesting as it does the movement of the great forces of the universe. But, after all, the underlying principles are the same, whether concerned with the movement of a glacier or the rolling of a flour barrel into the cellar.

By the conservation of energy we understand that principle by which the greatest amount of action is achieved with the smallest possible expenditure of force, and this principle is involved whenever the same power is made to do two different things at the same time. A very simple illustration is offered by the closely packed brick oven of our grandmothers, or by its modern prototype, the oven of the gas range, in which a single burner suffices to cook half a dozen different things at the same time. The sectional saucepan is another application of the principle. And many people to whom scientific terminology is absolutely unknown have mastered the art of doing two things at once.

People who are learning to use a typewriter are taught to hold their fingers as close as possible to the keys, as a help to the acquirement of speed, as the infinitesimal amount of time wasted with each stroke, if the hands are held high, means a distinct aggregate loss of speed. Here again is the principle of conservation. In the domestic domain it finds its counterpart in the tiny kitchen, where mistress or maid stands at the sink, with range and tables reached by merely turning.

The fact is that we all of us waste an unconscionable amount of energy in useless motions. We cross the kitchen a dozen times to get as many articles, when half of the number might have been brought at one trip. We make a complete circuit of a bed for each layer of covering, whereas a little skill enables one to make the whole of one side smoothly before beginning on the other. We clear the table after a meal and spread all the dishes out in discouraging confusion, while we might just as well have sorted them as we went along. We do not pile up our dishes as we wipe them, but have a separate process of classification. These are a few examples, but numerous others will occur to almost anyone. Such things seem to be trifles but their aggregate makes up an intolerable burden.

Housekeeping is, at the best, a difficult science, but we need to avail ourselves of all the helps at hand, and in a great many instances such help consists not in the purchase of labor saving appliances, but in the simplification of processes and in the avoidance of unnecessary movement. It is a good use for wakeful hours in the night to survey the domestic field and to study out at leisure ways of conservation.

The Pros and Cons of the Morning Gown.

I do not imagine that any woman who had once learned to do housework in her ordinary clothes, would ever be willing to return to wrappers or distinctively working gowns. The working gown with its suggestion of immaculate freshness, its material in neat stripes or checks, its careful adjustment of belt and buttons with a view of giving full

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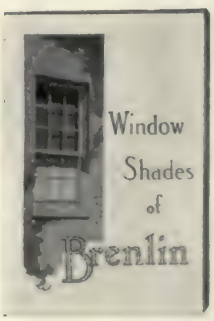
The difference in material is what makes Brenlin wear so much better. Ordinary shades are a coarse muslin, stiffened with a "filling" of chalk. This "filling" cracks and falls out, leaving the shade streaked, full of pinholes and unsightly.

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Brenlin is made in all colors and in Brenlin Duplex. With Brenlin Duplex you can have a uniform color outside and different colors inside to harmonize with the color scheme of each room.

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play to every muscle, sounds attractive on paper, and is doubtless well enough in hot weather, but cannot almost any one of us recall episodes when we have felt distinctly unhappy in that neat morning gown?

The morning gown supposes that its wearer is a fixture in the house during the hours in which it is worn. Now nothing is less desirable from an economic standpoint than that any woman should be a fixture at home in the morning. She ought to go to market, but is she to appear in the street in that neat checked gingham with the generous waist band and the comfortable soft collar with a tie of the material? And if she does conceal her utilitarian array under an all enveloping cloak, will she feel quite happy when she meets her friends arrayed in garments which are not subterfuges? Hardly. And the probabilities are that she keeps the neat gown at home and orders her meats and groceries by telephone, adding a very considerable amount to the cost of the family living. For the fact is that the average woman who does her own work has neither the time nor the inclination to change into street clothes in the middle of the morning. Yet nothing is of more importance than that marketing shall be done in person rather than by the market man, leaving out of the question the great value to a woman's health of being obliged to get out regularly every day.

A capital solution of the working dress problem is the simple shirt waist and plain cloth skirt, with a coat to match, with bloomers instead of a petticoat. As for the shirt waist, it is a very simple matter to have the cuffs fitted to the arm just above the elbow, so that when the sleeves are rolled up the cuffs can be fastened securely at that point, with their links. If the skirt is open at the center or side of the front, waist and skirt can be held firmly together by three patent fasteners, unless a better way is adopted. This is to have the bloomers snapped onto the belt of the shirt waist while the skirt, finished with stitched belt of its own material, will not need to be fastened to the waist, unless the wearer is very slender. Then, at times of special need for freedom of movement the skirt can be slipped off and the work which requires stooping or climbing done in shirt waist and bloomers.

Then for the necessary apron discard the time honored gingham in favor of table oilcloth, cut pinafore fashion, reaching to the bottom of the skirt. The cost of such an apron is trifling.

Again the Paper Bag.

It seems as if the paper bag had come to stay, as a cooking utensil. It makes a particularly potent appeal to the great army of people who hate to wash saucepans, or have imperfect facilities for doing it, living in hand to mouth fashion in furnished rooms. It may be doubted whether it will prove of great value to the average housewife. For one thing it does not seem to be adapted to the ordinary coal range oven, as a very high temperature is required, which can only be obtained in the coal oven, by getting up a huge fire. Any saving would be more than balanced by the increased use of fuel. In the long run the cost of the bags is considerable, far greater than the loss from wear and tear of metal utensils. As the bags must fit the food closely it is necessary to have quite a variety of sizes, and this involves considerable initial outlay. These things are trifles, but domestic economy is an aggregation of trifles.

For the ordinary household the method has its principal value in the preparation of tough meats and of watery vegetables. The originator of the system declares that an old fowl cooked in a paper bag becomes as tender as a young chicken, and is much better flavored, and the recorded experiences of other people substantiate his claim.

As for green vegetables, dietitians tell us that their principal value is in the salts which they contain, which have a medicinal use. In ordinary methods of cooking these salts nearly all pass into the water in which the spinach, asparagus, brocoli, or what not is cooked. But with paper bag cookery, in which not more than a tumblerful of water is used for a half peck of spinach, the salts are all retained in the fibre of the vegetable. This is certainly a point worth considering.

This book will solve your cleaning problem



During the past twelve months more than two thousand of the home owners in all parts of the country who have read it, acted upon its suggestion and equipped their homes with the

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The TUEC comes in sizes and styles suited to every possible demand. It can be installed in any building, whether already erected or in the process of construction,—whether wired for electricity or not. You will be surprised to learn how inexpensive it is.



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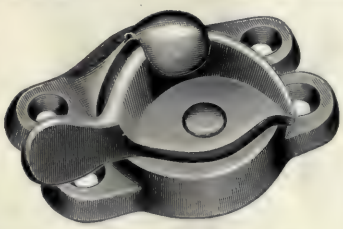
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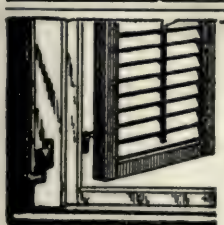
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Our illustration shows the attractive effect that can be obtained by adopting pergola treatment for your garage. This adds but very little to the cost of the building and makes it an attractive feature of your general landscape scheme instead of an eyesore, as it frequently is.

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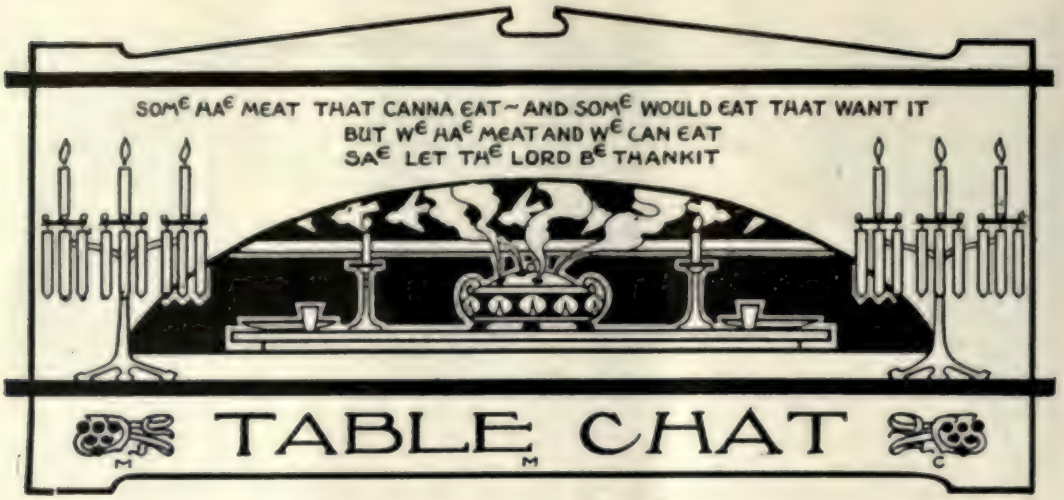
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Fish Dishes for the Lenten Season

By BEATRICE D'EMO



FISH STUFFED AND LARDED FOR BAKING.

ICE cooled railway cars now make it possible to enjoy deep-water fish even if one live in the interior, and fortunately at the time of year when the finny food forms the staple of the diet it is to be had in great variety and at its best, requiring only careful cooking to be delicious and wholesome, for it is one of the most digestible of edibles. Undercooked fish is not eatable, and overcooked fish is tasteless, therefore it behooves the cook to pay due heed to her time table. Fish is generally cooked sufficiently when the flesh separates easily from the bones, this rule applying to either baked, boiled or fried fish.

Always wash fish in cold water before cooking, wiping dry with a clean cloth. If it cannot be used as soon as sent home, sprinkle the inside thickly with salt, wrap in paper or a cloth and put on ice. Thus wrapped it will not impart a fishy odor to other eatables. Never use fish that has the slightest hint of disagreeable odor about it—the fishy odor is quite another thing—for stale fish is positive poison. Fresh-water fish some-

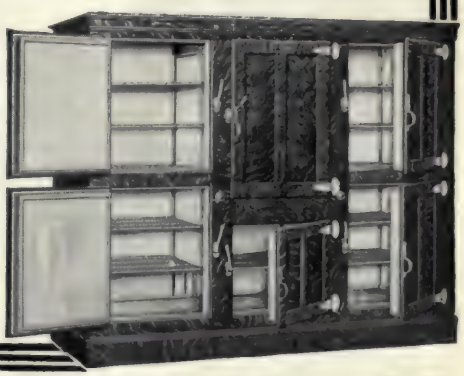


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Ready for Broiling.

times has a taste of mud, which may be removed by soaking the fish for an hour before cooking in strong salt water.

With boiled fish is usually served drawn butter, plain or with the addition of hard-boiled eggs or capers. With broiled or fried fish go lemon butter, tartare sauce, Hollandaise sauce, Italian or tomato sauce, and any of these may also be served with baked fish.

Fish suitable for boiling are cod, halibut, bass, flounder, bluefish, mackerel and whiting. The larger ones are boiled in a thick slice, the smaller ones whole. Ten minutes to the pound is a fair time allowance after the water is really bubbling. The sliced fish should be sewed up in a cloth in similar fashion, and the boiling done either in a regular fish kettle with a double bottom, or an ordinary kettle of large size used with a pie plate punched full of holes inverted in the bottom, the object being to keep the lower side of the fish from resting on the hot bottom of the kettle. By the aid of the napkin the fish may be neatly transferred to the serving platter, for it will be very tender and apt to break in pieces. The napkin also drains away the moisture, and some cooks have a second one folded compactly in the serving platter, laying the fish on this, then garnishing with parsley and serving the sauce in a separate dish; also, it is perfectly correct to omit the second napkin and to pour the sauce over the fish.

Sliced fish, such as halibut, cod or salmon, should be cut in inch and a half thickness. Put in the baking pan slices of the salt pork, cut very thin, sprinkle this with a thin layer of bread crumbs mixed with chopped onions and a little parsley. On this lay the slice of fish and squeeze over it the juice of half a lemon, then cover with more bread crumbs, onion, parsley and chopped salt pork or dots of butter, and bake in a quick oven for half an hour for a two-pound slice of fish. Remove carefully with the cake turners to the serving platter, and garnish with parsley and lemon, or surround with a wreath of well-washed cress.

Drawn butter is made by creaming together a cupful of butter with a tablespoonful of flour, putting it in a porcelain saucepan or a small casserole, pouring on it half a cupful of boiling water and stirring until smooth; cook for two or three minutes and salt to taste, also, if capers are liked stir in a tablespoonful of them, or for egg sauce stir in carefully, so as



Transferring Broiled Fish to Platter by Use of Napkin.



BUILDING THE HOUSE BEAUTIFUL

REGARDLESS of the cost of building a home, it may be something beautiful. Beauty isn't a matter of dollars, but of taste. Of course, the more dollars the more opportunity for taste; but a $1000 cottage may be just as unique, as a $25,000 mansion. Discrimination must be used in both cases.

The House that's You. By putting into the home those little touches that are characteristic of you, the house is made your house in a personal sense. It's different from all other houses, and if it truly expresses you, it is truly beautiful.

Its Surroundings. Such a house detached from its surroundings is not a home at all. It is the complete whole that makes your home a cozy corner for all who know you—the house and its garden that makes "home."

The Way to Build It. There must be a way—in fact, there is a way—to build the ideal home. Somebody, somewhere, stands a-tiptoe, ready to do it. In fact, for twenty years we have been doing this thing, gaining a wide and wider experience; and so, scattered over the country you will find houses that nestle into the landscape; homes, you will feel grew there by some natural process.

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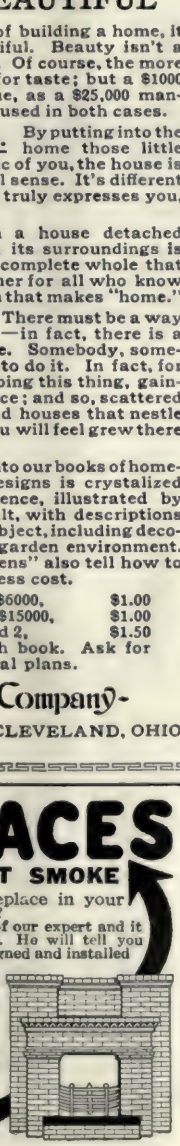
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not to break, two sliced or chopped hard boiled eggs. The eggs will not slice smoothly unless they have been boiled for twenty minutes, then allowed to cool in the same water in which they were boiled.

Halibut baked with milk is a good Lenten dish. Scrape the dark skin of the halibut, dipping it in boiling water. Lay the fish in the baking pan, first rubbing it well with salt and white pepper. Pour around it one-half to three-quarters of a cup of milk. Bake until the flesh loosens and separates from the bone, basting often with the milk. A four-pound cut of halibut will require nearly an hour to cook thoroughly. The milk should nearly all cook away or absorb in the fish and will serve to make it more moist. When done remove to the hot platter without breaking, take off the skin, lift out the bone, garnish with slices of lemon and hard-boiled egg, and serve with cream sauce, plain drawn butter, or egg sauce.

Salmon on toast is a simple entree easily made. Toast thin slices of stale bread quite brown and crisp. Butter while hot. Heat two cupfuls, or one can, of cold salmon picked into small flakes; add a cupful of lobster sauce, a half cupful of sweet cream, salt, white pepper, and a dash of paprika. When very hot remove from the fire, stir in one egg, beaten very light, and pour over the toast. Sift a little very finely minced parsley over the top, or garnish with watercress. Drawn butter or oyster sauce may be substituted for the lobster sauce.



SMELTS BREADED FOR FRYING.

To broil a fish have the backbone removed as for baking, and do not try to broil whole any but rather thin fish, for before they are cooked through the outside will char, also have sliced fish cut rather thinner than for baking or boiling. Mackerel, especially Spanish mackerel, bluefish and weakfish, are better broiled than any other way. The gridiron should be well rubbed with salt pork, and the fish put on it flesh side downward.



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a beautiful book of 200 modern homes costing $500. to $6000. I have had many years experience in planning houses, cottages and buildings, well arranged, well constructed and economical to build. If you want the BEST RESULTS, consult a man of experience and reputation for GOOD WORK. This book gives plans, exteriors and descriptions. Price $1.00. "BUNGALOWS and COTTAGES," a new book showing 50 up-to-date designs, all built from my plans, pretty one-story bungalows and cottages. If you want a small ECONOMICAL HOME, don't fail to send for one of these books. Price 50c. For $1.25 I will send you BOTH BOOKS. Church Portfolio, 25 cents.

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The "MONROE" is sold direct to you—at factory prices—on 30 days' trial. We pay the freight and guarantee "full satisfaction or money back." *Liberal credit terms if not convenient to pay cash.*

The "MONROE" is the **ONE REFRIGERATOR** with each food compartment made of a solid piece of unbreakable snow-white porcelain ware with every corner rounded as shown in above cut. The **ONE REFRIGERATOR** accepted in the best homes and leading hospitals. The **ONE REFRIGERATOR** that can be sterilized and made germlessly clean by simply wiping out with a damp cloth. The **ONE REFRIGERATOR** that will pay for itself many times over in a saving on ice bills, food waste and repairs. The **ONE REFRIGERATOR** with no single point neglected in its construction, and suitable to grace the most elaborate surroundings.

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Old Brass Trimmings.
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Garage of Terra Cotta Blocks with Plaster Veneer



Rowe & Keyes, Architects.

GARACE OF E. H. SAMSON, ROXBURY, MASS.

THE garage here illustrated was designed by the well known architects, Messrs. Rowe & Keyes, of Boston, Mass., and is thus described in a late issue of The Building Age. The garage is built of 6 in. terra cotta blocks on concrete trench walls carried below the frost line. The walls are plastered inside and outside directly on the terra cotta blocks and the roof is covered with shingles.

The main entrance is by means of doors of the sliding type and there is an entrance door at the side, all as shown in the picture given herewith.

The space for automobiles has a concrete floor, while the floors of the chauffeur's room and of the bath room are of hard pine on screeds set in concrete. Under the floor are layers of tar paper to hold down the dampness.

At the left as one enters from the front of the garage is a gasoline pump connecting with the underground tank just outside the building and indicated by means of the dotted line on the plan view.



Reproduced from a Drawing of the Residence of Milton Newman, Moss Avenue, Peoria, Illinois. Roofed with Asbestos "Century" Shingles by Frederick J. Klein, Architect, and F. Meyer & Bros., Contractors—both of Peoria.

When the architect and contractor roofed Milton Newman's residence with

Asbestos "Century" Shingles

"The Roof that Outlives the Building"

they accomplished *three things* for their client:

They gave a distinct *character* to the roof as an architectural feature.

They made his roof absolutely immune from fire risk.

They protected him for good and all from the cost of repairing and painting his roof.

Asbestos "Century" Shingles are the only *practical lightweight roofing* made of *cement* and *asbestos*.

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There is also a work bench near the side entrance and just beyond it is a gas radiator protected with a galvanized iron screen with grille on top. In the opposite corner and at the rear of the space for the automobiles is a Ruud gas water heater made by the Ruud Mfg. Company, Pittsburgh, Pa. It is properly enclosed by means of a galvanized iron screen and has a vent register through the wall inside of the casing and vent pipe connected with the soil pipe vent so as to take care of all escaping gas and prevent the gas flames from igniting gases that may be formed in the garage from the handling of gasoline for the cars.

The bath room is fitted with closet, tub and wash basin, all plumbing being of the open type. The bath rooms is heated by a gas radiator, as is also the chauffeur's room, the position of the radiators being clearly indicated on the plan.

The cost of the garage complete was about $2,200, at which figure the building cost $3.35 per square foot and 18.7 cents per cubic foot, cube computation being from bottom of footings to average height of roof."

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P. W. MacLagan, Architect,
45 Clinton St., Newark, N. J.

Cement Production in the United States.

According to the report of the United States Geological survey the production of Portland cement in 1910 reached the enormous total of 76,549,951 barrels, with a value of $68,205,800. This is an increase over the output for 1909 of 11,558,520 barrels. This increase alone is greater than the total output of Portland cement in 1900.

In addition to Portland cement there was also produced in 1910 a total of 1,139,239 barrels of natural cement and 95,951 barrels of Puzzolan cement.

The price of Portland cement in 1910 was as low as 73 cents a barrel in some places, the average for the United States being 89.1 cents per barrel. In 1890 the average was over $2 a barrel, and as late as 1903 it was $1.24 a barrel.

Repairing Concrete Affected by Freezing.

Considerable trouble has been experienced in repairing concrete which has been exposed to freezing weather before acquiring final set. The following method has been used quite successfully, says Engineering and Contracting:

Chip off with a pick and bull point the concrete which has been affected by frost, and then thoroughly wash the exposed surface with water, using a stiff scrubbing brush, until entirely clean. A 1:3 solution of muriatic acid is then applied with a brush, and the surface is again washed. As soon as possible after this is done a very wet mixture of new concrete is applied. Where the old surface has been thoroughly cleaned, and the new concrete kept damp for a week, it bonds nicely with the old surface, making it appear as solid as if the entire mass had been placed at the same time.

* * *

Laying a hardwood floor for a dance hall over a concrete floor that was not thoroughly dry, caused the floor to warp out of shape in a building in Omaha and it had to be taken up and a new floor laid, at a cost of about $2,000.

A Roof That Outlasts The Building

No one knows how many centuries Asbestos has been exposed to the elements without deterioration. And Cement and Stone (concrete) construction dates back to the time of the Romans, many of whose works are still in perfect preservation after a test of nearly 2,000 years. Both Asbestos and Portland Cement are practically everlasting.

J-M Transite Asbestos Shingles are composed of these **indestructible** minerals. They are made by moulding pure Asbestos Fibre and Portland Cement into one homogeneous mass under hydraulic pressure. There are no layers or laminations to separate in



Baraga High School. Baraga, Mich.
Covered with J-M Asbestos Shingles.

J-M Transite Asbestos Fireproof Shingles

These asbestos, or stone, shingles are not affected by acids, gases or chemical fumes. Continued weather changes have no effect on them. Freezing and thawing hasten the setting of the binding material. The more severe the weather conditions, the stronger and harder these shingles become. They never rot or decay; never warp or split. Do not break like slate, and are at least 15 per cent. stronger than laminated asbestos shingles. Are absolutely fireproof. And, like all stone, they never need paint or protection of any kind to preserve them.

Come in sizes and shapes to meet all conditions, and in colors of natural gray, Indian red and slate.

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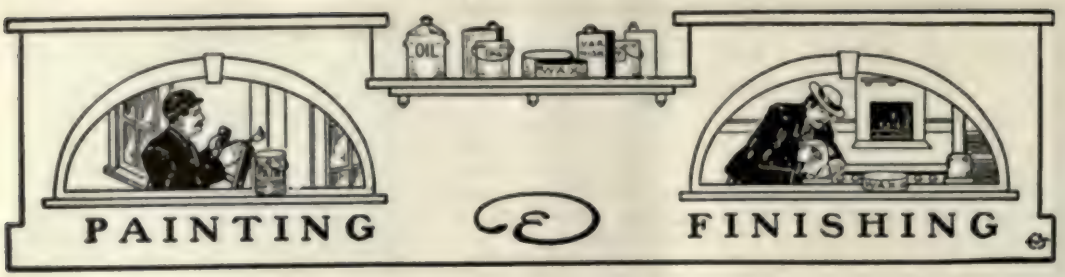


JACK'S HOUSE

This is the house that Jack bought.

As an investment it did not give very large returns.

SAID JACK: "I must improve the looks of this house. I'll write to the North Western Expanded Metal Co., 930 Old Colony Building, Chicago, Ill , for their booklet 'O', which contains full information for 'overcoating' old houses."



Why Good Paint Sometimes Fails.

FIRST: Cheap, poor lumber under it.

Second: Moisture, sap, soot or grease under it.

Third: Non-drying pigments like ochre, metallic, etc., used in priming.

Fourth: Non-drying oils, or oily, fatty, non-drying paint used in priming.

Fifth: Because flowed on with a broad, thin, flat brush, instead of being rubbed out well with a good full round bristle brush.

Sixth: Because of an insufficient quantity on a given surface. Two thin coats of paint will not wear well.

Seventh: Not allowing enough time to dry between coats.

Eighth: Excess of oil in under coats, especially the middle one in three-coat work.

Ninth: Carelessness or lack of judgment in methods of application.

Tenth: Thinning too much with oil turpentine, etc., to save labor and cost of material.

Eleventh: Damp plastering when paint is applied.

To Prevent Discoloration of Interior White Finish.

A Southern correspondent, who has had trouble with interior white finish turning yellow and has used white lead and oil, thinned with turpentine, for the ground coats and French zinc ground in bleached linseed oil, thinned in turpentine for the finish, which was to be eggshell gloss, writes to the Painters' Magazine for information as to the remedy for the yellow appearance of the finish after the work has been done for about a month. The answer is as follows:

The best thing to do is to purchase from a reputable paint manufacturer pure French zinc, ground in paste form in the best white damar varnish, thin it with pure spirits of turpentine to the right flowing consistency and apply it over the finish that has yellowed off. As an act of extra precaution we suggest a mossing down of the surface with No. 0 steel wool or sandpaper before applying the new finish, also the addition of a small portion of ultramarine blue to throw the white off the creamy tinge. Before applying the new coating test it out on a similar ground, and should it be too flat for eggshell finish add a trifle of white damar varnish or enough to give you the luster desired.

Paint for Buildings Outside and Inside.

Some painters will use nothing but white lead and linseed oil and mix it themselves. There are others who claim that it has been found by many severe tests and much careful experimenting that better paint can be produced by combining zinc in right proportions with pure lead and pure linseed oil. The zinc counteracts the tendency of the lead to powder and chalk, greatly increasing the life of the paint. It also makes a whiter paint, and, when used with lead as a base for the various colored shades of paint, it serves to make a combination that takes the coloring matter readily. Then, too, the combination of zinc and lead enables the manufacturer to get the largest possible quantity of linseed oil into each gallon. This is important, as pure linseed oil, more than any other ingredient, gives durability and life to the paint. All good prepared paints contain zinc, lead and oil. Zinc is used in the form of oxide of zinc and lead as sulphate of lead and carbonate of lead. Years of experimenting have demonstrated that carbonate of lead alone, when used with zinc, does not give the highest degree of efficiency, but when combined with the right proportion of sulphate of lead, the



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One of these exteriors is shown above. There are a number of others, each in a different style of architecture, each showing a different color scheme, and accompanying each are accurate and complete specifications for producing the results shown. These decorative plans are practical—any good painter can carry them out. The acceptance of this Portfolio places you under no obligations to use Sherwin-Williams Paints, but to get the best and most lasting results you should use them.

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combination is ideal. The proportions in which the necessary pigments, oxide of zinc, carbonate of lead and sulphate of lead, are used, are important when combined in incorrect proportions the paint will be far from satisfactory. It should therefore be borne in mind that the mere fact that a paint contains white lead and zinc does not necessarily mean that the paint is good. The form in which the lead is used, and the correct proportions, are very essential. Paint knowledge, skill and business integrity are quite as important in the making of really good paint as are the sulphate of lead, carbonate of lead, oxide of zinc and pure linseed oil, even when used in the proper proportions.

Wood Staining Art.

By A. Ashman Kelley, An American Paint and Oil Dealer.

That master painter whose practical knowledge of wood staining is small is badly handicapped in the race, for nowadays it is necessary almost above anything else that he should understand how to stain. This means that his knowledge concerning stains must be full and complete.

Now there are two classes of wood stains, water and oil. Or we might say, taking into account this time the pigment materials; mineral, vegetable and chemical.

Within the last ten years or so we have gone from water to oil stains, though we used the latter also, years ago. The water stains are the most satisfactory in some regards, oil stains are better in others. Water stain is cheap, easily applied, and gives a deep and also transparent coloring. But it raises the grain of the wood. Oil stains do not give as clear a coloring, because they combine with the pigment and remain on the surface texture of the wood, to some extent, and thus work against perfect transparency.

Oil stain does not enter deep into the wood; hence, when it is desired to alter the color of a room, say to change from some color scheme to some other, it is easy to get rid of the oil stain, for it is mostly on top; but the water stain is all through the wood and own deep. And in speaking of water stains we must include spirit stains, as these, alcohol or turpentine, act the same as water in this respect.

Speaking of changing color effects in a house, what a change in color when we look back only a very few years and remember how crazy people were for quartered oak with the golden hued flakes, looking like a zebra. Now it is dark and sad looking for the same people. Such is life. Such is fame. The brightest flakes are now saddended with ammonia or potash.

The same stain will give different effects on different woods. Bright fresh wood will give a different effect than old or dull wood. Often a stain will change from exposure on the wood. Some woods, like white oak or chestnut, contain tannic acid, and when certain stains are applied the wood will darken. Chloride or iron will give a blackish-gray stain. Sulphate of iron will yield a bluish gray. By deepening or weakening a stain a deep or light color may be obtained. Weathered oak stain will come out gray on white oak, and greenish-gray on pine. Mahogany stain will turn red on oak, brownish red on birch, and still browner on mahogany.

When the painter applies a coat of blue or white or other paint to a surface he gets what he expected, a blue, or white, or other desired color effect. That is the effect of paint on wood or metal. But when you stain wood the stain sinks in, leaving the wood slightly changed from the stain. The result will not necessarily be to get a color of the same hue or kind as that of the stain.

Color manufacturers claim to be making stains that are more light-proof than formerly. I hope they will succeed, for surely nothing can be more annoying than to find a handsomely stained and finished job turning dull and losing its original beauty of color in a short time. You will find sometimes samples of stains and finishes on blocks or slats that have changed so that the manufacturer who sent them out would fail to recognize them as his own. We have seen offices beautifully stained, and wherever the sunlight struck the work the most of the color had gone. This is only what we ex-



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Don't Pass Lightly Over Varnish Questions

With the rush and hurry to get the new home completed you are very apt to make the old mistake of not giving enough thought to the varnishing of the doors, floors and woodwork.

It's a costly mistake.

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pect of vegetable and aniline stains, and if the enterprising stain maker has nearly succeeded in getting a light-proof stain for wood work we shall be glad indeed. Vegetable stains give rather better satisfaction in this respect than the anilines do, but at the same time they are not light-proof. The mineral stains, sienna, umber, Vandyke brown, these are durable.

When you have a stain job to do, better try the stain out on a piece of the same wood as the finish, and see how it acts; this will sometimes save you lots of trouble afterwards. Tannin and tannic acid combine readily with the anilines, and the combination results in various changes of the colors.

Ammonia affects the tannic acid in oak, darkening the wood. But ammonia will bleach out pine and poplar wood. Hence it is not worth while trying to fume the latter woods with ammonia, unless you first apply a coating of tannic acid, in which case the result will be the same as with oak. Red oak does not fume as well as white oak.

This so-called fuming may be done either by means of the fumes arising from ammonia of the greatest strength, in an air tight enclosure, or by the application of liquid ammonia of less strength. The beauty of fumed work consists in the even coloring it effects, and the beautiful coffee brown tone of color it imparts to oak. The actual fuming gives better results in this respect than the liquid application.

Cypress does not take kindly to oil stain; in painting this wood painters have found out that oil dries poorly over parts of it. Now if some benzol is added to the oil better results are secured. Benzol seems to dry the oil, and carries the stain down into the wood better than oil does it. Even a plain coating of this mixture of raw linseed oil and benzol will give a nice brown color to the wood.

Another Example of the Glidden Quality

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GLIDDEN'S Waterproof Flat Finishes are the most perfect wall finishes on the market. They are especially manufactured for interior use on old or new plaster surfaces either rough, smooth or sand finished, producing a beautiful, soft flat finish that can be washed without injury.

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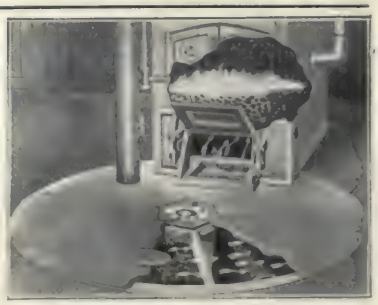


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Heating, Lighting and Plumbing

The Forthcoming Federal System of Heating and Ventilating.

AN IDEA of what heating engineers may expect to find in the forthcoming publication of warm air furnace ratings and the Federal system of heating and ventilation, soon to be issued by the Federal Furnace League, is given in an address made at the recent convention of sheet metal contractors at Omaha, Neb., by Dr. W. F. Colbert, the engineer of the league.

Dr. Colbert said that when the full furnace ratings were published and with the Federal system of heating and ventilation at hand, it will be possible to calculate the sizes of warm air pipes and registers, vent ducts and registers, fresh air duct, fresh air room and fresh air intake window, ventilating shaft, chimney and furnace in an average time of 2 minutes per room, after the measurements have been taken from the plans. At that rate, the figures for an 8- or 9-room house, with bath, could be set out in approximately 15 minutes.

This simplification of estimating methods has been devised on account of the impossibility of a dealer's spending the necessary time to experiment on the heat losses through glass and walls under varying wind and temperature conditions. Yet, heretofore, that is the only way he could secure the information, because all the heat loss data in text-books is based on laboratory experiments in still air, and still air never occurs outdoors.

Then, after making more or less of a guess at the size of furnace required to heat the building, it has been necessary to determine the proper size of fresh air duct, fresh air room and fresh air window, for more than one otherwise good installation has been ruined by a fresh air intake widow that is entirely too small. Moreover, if a ventilating system is included with the heating plant, it has been necessary to make complicated calculations to determine the proper size of main vent shafts.

According to the forthcoming Federal system, there are only a few calculations for each room, in such small numbers that, with a little practice, they can be done by mental arithmetic. Then the heat losses from all the rooms to be heated is totalled up by adding the line of figures. After that is done, it only remains to refer to the printed tables, included in the League's system, for the sizes of everything needed to lay out a complete job and then to look in a furnace catalogue for the number of the furnace required.

150 More Furnaces to Be Rated.

In connection with the work of testing warm air furnaces, which has been under way for over a year at the League's Philadelphia testing plant, Dr. Colbert stated that before closing down for the summer completed rating tests had been made on 38 furnaces from eight manufacturers. From these test results and the measurements of the other sizes of the same series, taken since the tests were made, it will be possible to rate more than 80 furnaces in the 17 series represented. The league has at the testing station or has promised for immediate shipment about 60 furnaces from nine other manufacturers. From the tests on these furnaces the league will be able to rate about 150 furnaces in 27 series represented.

The furnace testing, Dr. Colbert stated, is undoubtedly going to stimulate interest in furnace design. At this early date several of the members are at work making more or less important changes in the furnaces tested. Two of them are at work on entirely new designs, with the idea of surpassing the results obtained in the tests on their present lines of furnaces. There are others whose furnaces are listed for tests who have stated their intention to try to improve their furnaces

Cut Your Coal Bill in Half
THE UNDERFEED *Does It*

THE EFFICIENCY, as well as economy, of UNDERFEED heaters, was emphasized the past winter — the coldest in many years. UNDERFEED users and dealers everywhere so testify.



Underfeed Furnace

The Underfeed booklet, sent free on request, clearly explains the Underfeed way of producing clean, even, adequate heat, regardless of weather conditions, at a **saving of ½ to ⅔ the usual cost.**

If you intend to build; if your heater (new or old) is unsatisfactory; or if you still use stoves or grates, install an Underfeed furnace or boiler; soon pays for itself in low cost of heat, and adds to the selling or renting value of your property.



Underfeed Boiler

Adapted for all buildings (large or small) residences, offices, institutions, schools, churches, halls, etc. Simple in construction, substantial and durable; is easily operated, and requires less attention than heaters of the ordinary type.

The Peck-Williamson Underfeed
HEATING SYSTEMS WARM AIR FURNACES - STEAM-HOT WATER BOILERS

In the Underfeed, cheaper grades of soft slack coal and pea and buckwheat size of hard and soft coal yield as much clean, even heat as highest priced coal in other heaters. Coal is fed from below—pumped up underneath the fire by an easily operated lever, acting on a plunger. See diagram below showing vertical section of feed device and fire pot, which applies to both furnace and boiler.

Fire is on top and sides, BETWEEN the fresh coal and radiating surface of fire pot and dome.

This principle insures greatest heating efficiency. Smoke and gases, wasted in ordinary heaters, pass up through the fire in the Underfeed, are consumed, yielding more heat. Perfect combustion results. No clinkers. The few remaining ashes are easily removed by shaking the grate bar.

Saved $40 in Coldest Winter

R. C. Harris, Pres't., Century Saw Mill Co., 810 Olive St., St. Louis, Mo., Feb. 17, wrote: "I have used the Underfeed two winters, the last the severest ever experienced here. Had no trouble whatever in keeping the house above 70 while my neighbors had difficulty in getting heat at all. *Have cut my coal bill from $85 to $45 each winter* and have not skimped coal either. Have looked after the firing of the furnace since I was a youngster and have never come in contact with one which equals the Underfeed in satisfactory results."

WRITE TODAY for our free furnace booklet or boiler catalog and facsimile testimonials. Our Engineering plans also are free. Use coupon, giving name of local furnace or boiler dealer with whom you prefer to deal.



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DEALERS—Get Our Sales Agency Plan. WRITE TODAY.

THE PECK-WILLIAMSON CO., 385 W. Fifth Ave., Cincinnati, Ohio.

I would like to know *more* about how to cut down the cost of my Coal Bills from one-half to two-thirds. Send me—FREE—

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(Indicate by X Booklet you desire)

Name..... *Street*.....

Postoffice..... *State*.....

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as soon as complete reports are in their hands. This promises well for the development of better furnaces.

There can be but one conclusion, said Dr. Colbert, from the league's experience to date; that is, that united effort on the part of manufacturers of and retail dealers in warm air furnaces will surely result in making furnace heating, with ventilation, as fashionable and profitable as hot water heating was ten years ago.—Heating and Ventilating Mag.

Warning on Gas Stoves.

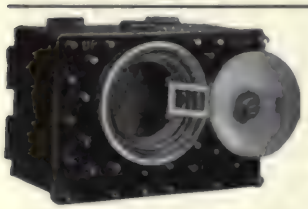
Dr. Clemmer declares outlet flues are as necessary on gas stoves and grates as they are on furnaces. In his report he states:

"If upon entering the living room or office from the open air there is detected a stuffy, oppressive atmosphere, suspect slow poisoning of the inmates in the presence of the unventilated stove," says the report. Many a funeral, it is declared, comes from the home heated with unventilated gas or oil stoves.

"The essential function of the blood to carry oxygen from the air to all parts of the body to sustain life is diminished for the reason that there is formed a combination between noxious gas and the hemoglobin of the blood. The oxygen-carrying properties of the blood cells are thus destroyed in proportion to the amount of poisonous air inhaled. The victim of the unventilated gas stove may suffer from a dullworking brain and headache, or death may ensue, depending upon how long and how much he breathes the poisoned air."—Exchange.

Electric Heater and Fireless Cooker.

A cabinet is now in use in the West which will cook a square meal at a trifling cost, without allowing the odors or the heat to escape into the room. The principle of the fireless cooker is combined in this device with that of the electric heating device, both being well and favorably known as separate inventions which make for kitchen comfort. The cabinet is built with the perfect insulation from heat and cold, which is the feature of the fireless device, but an important advantage is that the heat is applied from within. In other words it is not necessary to bring food to the boiling-point on an ordinary stove and set it in the cabinet. All that is required is to place the material for a meal within the compartments, close the doors and turn on the switch. A thermostatic arangement allows the temperature to rise to a given point, when the current is automatically cut off.—Tech. World.



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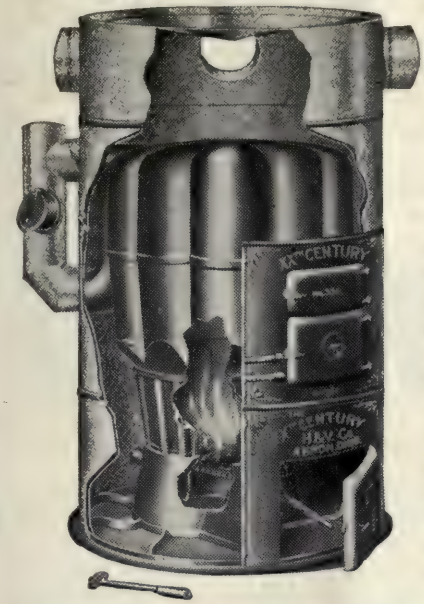
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Home Comforts and Home Delights



do not come from wealth or large income. They come from having the home evenly, cleanly and economically heated. The proper kind of furnace costs less than stoves or grates.

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are used and praised universally by many thousand home owners everywhere—in every climate. They are made right, and have the only sensible and Economic Fire Pot ever made. They burn all kinds of fuel—even cheap grades of soft coal, slack, etc., with perfect combustion and yield one-third more heat at one-third less cost than any other Furnace made.

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and yet clean, healthful. No work, no repairs; sanitary, ideal. Write us, giving a sketch or plan of your house, indicating the number of rooms to be heated, and let us tell you how you can get a XXth CENTURY FURNACE, and try it on our Common-Sense Guarantee Plan. Ask for our little booklet on the Homes, No. 36.

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AKRON, OHIO



250 INTERIORS BEAUTIFUL
AND THEIR DECORATION

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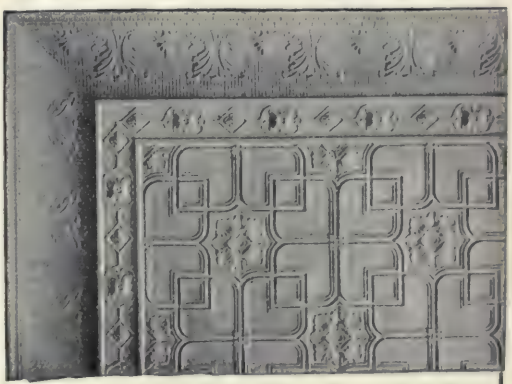
This book will prove to be one of the most interesting of Keith's Publications, and of great value to the home builder.

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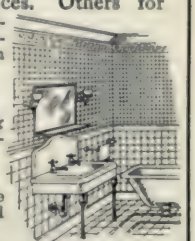
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OUR TILE BOOKLET

shows just what you want for the walls and ceilings of the Bath and Kitchen.

NORTHROP, COBURN & DODGE CO.
33 Cherry St., NEW YORK

SPLINTERS AND SHAVINGS

Adjusting a Battened Door.

A COTTAGE door made of boards and battened can be adjusted in the following manner: Take the door off its hinges and stand it in a vertical position, grasp the sides and jolt it forcibly down on a heavy block or stone on the corner that is low. The weight of the door added to the force of swinging it down on the block will quickly put it in proper shape.—Contributed by John V. Loeffler, Evansville, Ind.

Wallpaper Protection.

The condition of the paper on a wall behind pictures may be kept similar to that on the uncovered surfaces by placing a glass push pin in the wall where each lower corner of the frame rests. This keeps the picture away from the wall and allows the air to circulate freely. —Popular Mechanics.

Settling the Account for Extras.

If the job is being contracted for by a carpenter to furnish the materials and do the work, it is frequently the case that the owner does not know the extent of the amount of extra material that you are sending out on order of the contractor for his job. He has entertained the supposition that his contractor put in the bill enough material to complete it. If this had been done, probably some other carpenter would have got the job. But he let the contract to the lowest bidder and supposed the latter knew his business well enough to know what he was doing, doubtless this was true. The carpenter knew what he was doing, but the owner did not know he was letting a contract for a job that would cost him a good deal more than he expected. So, when settlement time arrives "there must be some mistake" and the onus of making it is put upon the dealer, and the burden of proof is on him to make clear that everything he has got charged in the extras for that bill went, not only for, but into the construction of that building.

I have had a few cases in my own experience, when stuff went out of the yard presumably for a certain job and was delivered there, but afterward most of it went to help out on a repair job which the carpenter had elsewhere. Of course, this don't often happen, and I only speak of it for the benefit of some young dealers who never have run up against this sort of thing. A farmer is slow to understand why a bill of seventy-five or a hundred dollars' worth of material should have gone into his house that was not on the original bill that he took so much pains to buy at the lowest figures. The question with him is either his carpenter was lacking in ability to make out a sufficient bill or made a mistake in his computations, or that the dealer has charged against him what should have gone on some other bill. And, as I have said, thinks there's a mistake somewhere. The dealer knows very well where it is, and if he explains it to the farmer he must be careful how he talks in laying the blame on the carpenter.—Carpenter and Builder.

Nest Tables.

This revival of an old fashion must be popular, to judge by the great number of nest tables seen in the shops. They are of all styles, woods and prices. One set recently seen was of white mahogany, delicately painted in the style of the Adam brothers, and the outer table was oval and considerably larger than the others, very much, in fact, the shape and size of the bed room tables which used to come with sets of painted bed room furniture.

What to Do With Casement Windows.

There is a prejudice against the casement window on account of the difficulty of knowing just how to curtain it. Part of the diffiiculty disappears when the casement opens outward, and windows so opened are said to be less likely to let in air and water. In that case, it is possible to hang shades and curtains inside the window frame, they interfering as little with

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CHARMING Moorish beauty and dignity of appearance of Metal Spanish Tile gives an air of distinction to the home graced by this wonderful new and practically indestructible roofing.

It has taken home builders of America by storm, for it is the modernization of the wonderfully beautiful roofs of historic Spanish edifices.

The art of making this roofing, left behind by fleeing Moors driven out of Spain centuries ago, until 1910 could not be made practical for the modern home, despite its alluring beauties.

After years of experiment, we have hit the solution. That is why today we are able to offer American homes the amazing attractiveness of

Metal Spanish Tile Roofing

Its scores of vital, practical advantages cost no more than common roofing, yet mean tremendous economy—it needs no repairs and outlasts several ordinary roofs because of its practically indestructible metal construction.

It is absolutely wind, weather, storm, fire and lightning proof.

Easy to apply. No soldering, no special tools—any ordinary mechanic can apply it. Interlocking system by which tiles dovetail into each other makes the roof absolutely water tight and provides for expansion and contraction perfectly—summer and winter. It is guaranteed non-breakable.

HOME-BUILDERS — Simply send us today the dimensions of your building and we will tell you by return mail exact cost of all material. Our new 1910 book on beautifying the modern American home by use of **Metal Spanish Tile** is yours for the asking. A postal will bring it. Address

The Edwards Manufacturing Co.

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Complete high pressure system that will supply running water for bathroom, kitchen, laundry, stables and garden. Black steel, 145 gallon capacity, verticle tank. Horizontal double-acting force pump. Fine quality cylinder cocks, valves, etc., with pipe and fittings cut and threaded for easy installation.



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M.J. GIBBONS DEPT. C DAYTON, O.

the casement as with an ordinary window. For the casement which opens inward, a separate treatment for each half is needed. There must be a shade for each, and the only practicable curtain is a thin one next the pane. A good effect may be had by using a bordered vestibule net, or muslin, without fullness, and tying it a little way up from the bottom of the window. Or Madras, or other soft net may be left loose at the bottom, and edged with a tasseled fringe. If the casement window is recessed, it is much improved in appearance by long curtains of heavy material, hung outside the window frame. Some sort of a valance at the top is desirable, both to conceal the attachment of the curtains next the window, and to correct the appearance of abnormal length usual with casement windows.

A Witty Roast.

John Sloan, the well-known artist of New York, takes the same intelligent interest in architecture as in painting.

A New York architect, aware of Mr. Sloan's excellent taste, took him in his motor car to see a huge and costly country house that he had erected for a millionaire on a bluff overlooking the Hudson.

As the architect stood with Mr. Sloan on the terrace of the new property, he looked up at the mansion's showy facade, and said thoughtfully:

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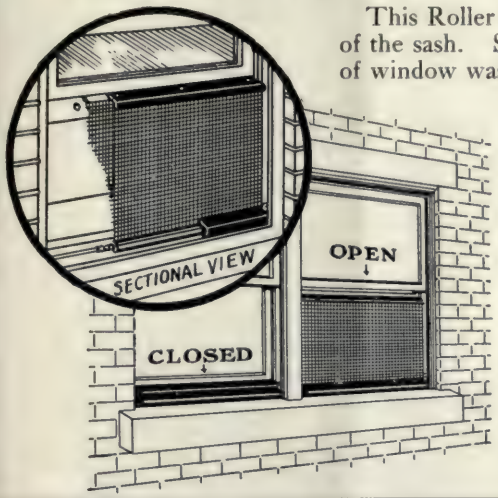
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Contains original, practical, beautiful ideas and designs for building Bungalows, Country Homes, and 2-story City Residences. It specially deals with the delightful West Coast Bungalow, a style of home most suitable to all climates. Contains 24 photographs and floor plans—designed by leading architects and actually built for the amounts given. Tells also the interesting story of Red Cedar Shingles, how to make a new roof last a life-time, how to save frequent paintings, how to finish the exterior of your building artistically and economically. We have no plans nor books to sell. We are manufacturers of Red Cedar Shingles and want you to know about Red Cedar before you build. Send six cents, stamps or coin, for above book.

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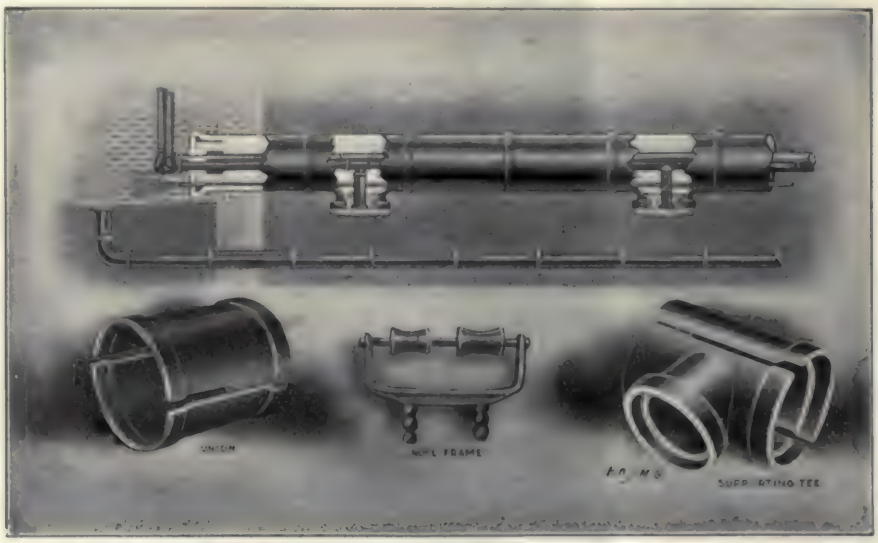
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New Booklets and Trade Notes

THE readers of Keiths Magazine who are expecting to build or to remodel their homes should send for a copy of the illustrated booklet issued by the John Thomas Batts Co., Grand Rapids, Mich., showing the Batts system of closets, wardrobes and fixtures for the same, improved garment hangers and carriers. By the use of this system much of the space now devoted to closets can be utilized for other purposes.

* * *

The J. M. Sectional Conduit Catalog issued by the H. W. Johns-Manville Co., exploiting their Underground Pipe Covering system—might at the first blush, thought to be of interest only to engineers or contractors for large commercial buildings. It is true that this method of conveying heat from one central plant has so far been mostly employed only for university or college buildings, large commercial plants or flat buildings. But why should housekeepers not share in the ease and economy of such a method of heating ordinary dwellings? Why not a central heating plant to supply several neighboring dwellings as well as the detached buildings of a university campus? What an inexpressible boon to the wrestlers with separate heating plants, such a transmission of heat would be. Life would really be worth living in the winter season. In looking through this interesting catalog, one can see no reason why such a method of heating dwellings in the city should not come into general use.



DETAIL OF J-M SECTIONAL CONDUIT SYSTEM.

* * *

A Milwaukee Engineer Invents Cheap Power.

A Milwaukee company has perfected a plan for producing power from crude petroleum, unrivalled in cheapness and efficiency. An epoch-making discovery in gas engineering has thus been brought to a practical, commercial basis.

The invention is the adaptation of the producer gas engine to gas created from crude petroleum by a method so simple as to commend itself, at sight, to every practical engineer.



Are You Proud of Your Walls?



When some friend comes to call, are you fearful of what she may think of the taste shown in the decoration of your home? Is there the harmony between the walls, pictures, hangings, etc., that just satisfies you? There is one method of decoration that will give your home an artistic and harmonious interior.

Paint Your Walls! Stencil them with exclusive stencil designs that add to their beauty and attractiveness. Walls painted with paint made of

Dutch Boy Painter

Pure White Lead

and pure linseed oil, are rich and harmoniously beautiful. Painted walls are sanitary and durable; they may be washed; one soiled spot does not require the redecoration of an entire room.

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Let Us Furnish the Stencils

Send us the certificate and 10c and we will send you a stencil cut ready to reproduce the design shown here, and our stencil catalog showing 100 designs, any of which you may order at 50% discount. Or, if you prefer, send no money and we will send you the catalog free and you can order the designs you like at 50% discount.

NATIONAL LEAD CO.
Stencil Department
111 Broadway, New York

Paint Points
(3)

To neglect painting is to waste money. The minute you discover that your house needs paint, call the painter and ask for a mixed-on-the-premises-Dutch-Boy-Painter-Pure-White-Lead job.

Send for Painting Helps 612
NATIONAL LEAD CO.

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New York Boston Buffalo Chicago
Cincinnati Cleveland San Francisco
St. Louis

(John T. Lewis & Bros. Co., Philadelphia)
(National Lead & Oil Co., Pittsburgh)



It means nothing less than a revolution in marine power, and next in usefulness will be its application to the reclamation of land in the arid sections of the world.

Low grade oils, some of them so poor as to be valueless for refining, and even the residue of refined oils, are all made available at once for human assistance and support. The highest authorities estimate that the heat value of oil in known oil fields is as great, and probably greater, than the resources of all the known coal fields of the world. A uniform supply of crude oil, at moderate prices, is therefore promised for us and for many future generations.

* * *

The Armstrong Cork Co., Pittsburg, Pa., publish an extremely fine booklet in board covers, setting forth the superior merits of their Nonpareil High Pressure Coverings for insulating boiler pipes, etc., of heating plants. They make a very strong claim indeed for the efficiency of their coverings, and support it by many tables of comparison and actual tests. The illustrations add much to the clear comprehension of the reader.

* * *

H. W. Johns-Manville Company Become Sole Selling Agents for I. P. Frink Reflectors and Illuminating Specialties.

The H. W. Johns-Manville Company, already well known in the lighting field by reason of their J-M Linolite System of Illumination, have acquired the Sole Selling Agency for the entire products of I. P. Frink.

"Frink" reflectors and fixtures need no introduction to the lighting trade and consumers throughout the country, and this arrangement means that the H. W. Johns-Manville Company will be in position to design and sell lighting systems for every known form of artificial illumination.

The standing of these two respective companies throughout the country, places the stamp of merit on this combination, and undoubtedly all interested in artificial illumination will be benefited by the uniting of these forces, as the Frink Company have been following this particular line of work for the past fifty consecutive years.

An Engineering Department will be maintained along very extensive lines. This department will maintain a corps of engineers throughout the United States and Canada, and be equipped to place data and recommendations in the hands of all interested in any subject pertaining to illumination.

* * *

We are in receipt of a very handsome catalogue and treatise describing and illustrating *Marine Engines* and their *Equipment.* The treatise is published by the Ferro Machine & Foundry Co., Cleveland, Ohio, the largest marine engine builders in the world. It is written for laymen as well as boat builders, and gives a brief description of the principles on which a gasoline engine operates, as embodied in the Ferro engine, which this treatise and catalogue illustrates. Photographs have been used for the illustrations in the belief that they would be more easily understood by persons without mechanical training, than mechanical drawings. A glossary of terms at the end explains technical expressions likely to be unfamiliar to the layman.

A perusal of this interesting treatise will be sure to give readers a fair insight into the subject of gasoline engines.

* * *

A profusely illustrated booklet has been issued by the Dunham Co., Marshalltown, Ia., describing the *Dunham Vacuo-Vapor System* of *Heating* and in particular the *Dunham Radiator Trap* which is the heart of the Dunham System.

The catalog is plain and understandable and sets forth strongly the peculiar merits of this system. Our readers will, we feel sure, be repaid by a perusal of it. Sent on request.

* * *

The American Radiator Co. have joined the ranks of the publishers and now issue a monthly *Ideal Heating Journal* devoted to the advancement of the Steam and Hot Water Heating Industry.

Among the interesting table of contents for the February number, is an illuminating résumé of the Basis of Boiler Ratings, extracts from which appear in another column of this magazine.

UTILITY



ANYONE who can handle a hammer and saw can apply Utility Wall Board to walls and ceiling.

It is nailed direct to the studding—or in old buildings may be put on over old and cracked plaster—Once in place it will last as long as the building stands—

UTILITY WALL BOARD

Is very tough and strong—It is moisture proof and will not crack or warp—The surface is ideal and may be decorated in any style desired—It does away entirely with the need for lath and plaster—lasts longer than lath and plaster and is more economical—also—It does away with all the dirt and muss and inconvenience of plastering—

For the man who likes to work with tools
Utility Wall Board is wonderfully convenient—

It can be used not only for covering walls and ceilings, but for making partitions, closets, shelves—and for all sorts of cabinets, boxes, screens and so forth—Comes in sheets of convenient widths and lengths—

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Book sections have non-binding, disappearing glass doors, and are highly finished in Solid Golden Oak. Other styles and finishes at correspondingly low prices. Write for new catalogue No. 9.

THE C. J. LUNDSTROM MFG. CO., LITTLE FALLS, N. Y.
Manufacturers of Sectional Bookcases and Filing Cabinets
Branch Office, Flatiron Bldg., New York City

Concreting in Cold Weather is a valuable pamphlet issued by the Universal Portland Cement Co. which will be welcome to all contractors and builders as well as interesting to owners. So much concrete work is now carried on through the coldest weather that such information as is here given as to the best practice in handling it and the results gained from laboratory and field tests as well as individual experiences, are of the greatest worth. All this is presented in *Concreting in Cold Weather.*

In line with this is another pamphlet which will be appreciated by builders generally viz., *Bulletin No. 12,* issued by the Turner System of Reinforced Concrete Construction, with main offices in Minneapolis, Minn.

The Bulletin shows examples of this method of work in many illustrations and gives substantial proofs of their claim of an enormous amount of work put up without a single record of collapse or failure though executed under all conditions and temperatures ranging from 103 in the shade to 28 degress below zero.

* * *

Expanded Metal Construction is the title of a bulletin to be issued at frequent intervals by the Northwestern Expanded Metal Co., Chicago. This bulletin will describe the uses of expanded metal reinforcing fabric and Kno-Burn plastering lath. The first issue illustrates an attractive concrete girder bridge and method of placing the reinforcing steel, as well as other examples of work done.

* * *

We have received from the American Book Co., Chicago, a copy of a book just published by them on *Constructive Carpentry*—which seems admirable in contents and press work. The author, Chas. A. King, Director of Manual Training in Bay City, Mich., has published a series of five volumes on this and kindred subjects. While primarily intended for use in manual training, technical or industrial schools. The volumes are of value both to the prospective and the finished workman, and to all students of building and engineering. In the present volume, which has special reference to the construction of wooden buildings—the important problems met with in preparing a house for the inside finish are discussed and the relation between the carpenter and other mechanics is explained.

The illustrations in the book are from easily understood drawings made by the author, and a glossary of technical terms used adds to the usefulness of the volume.

* * *

A new decorative coating for cement, stucco, brick and stone walls has been placed upon the market by the Billings-Chapin Co., with heaquarters at Cleveland, Ohio.

They have issued a booklet setting forth the merits of their product *"Driwall"* with samples in color showing very soft and rich shades. Specifications for use and cost tables are also full and complete. The booklet is furnished on request.

* * *

A new applicant for the public favor in the manufacture of Wall Board is the Upson Co., Lockport, N. Y., who issue a very attractive booklet which they call *Interiors Beautiful.* As the name implies—the booklet is filled with illustrations showing the practical uses of their Wall Board, together with diagrams of the different styles of panel effects and full directions for use. Incidentally they announce a side product—the Upson Fibre Tile, which can be enameled and applied as a cheap but durable and sanitary wall finish for bathrooms, kitchens, etc.

* * *

The Oak Flooring Bureau, of Detroit, Mich., is making up a very handsome book. It contains very practical and valuable information about oak flooring from the mill to the finished floor. It treats every subject in such a way that it can readily be understood by anyone. It features how to measure the room to order the right quantity of oak flooring, the laying, scraping, finishing, care and other valuable features. This book, sent upon request, would prove very valuable to architect, dealer, carpenter, or housekeeper.



Mon-arch **Concrete Mixer $218**

complete with high grade gasoline engine, all mounted on truck. Capacity 40-50 yards in ten hours with two men. Low feed. Saves cost in 60 days.

Concrete Machinery of all kinds.

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It is of moderate cost and the outside is of Plaster Work, now so popular.
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The writers, selected by Architect Fred T. Hodgson, Editor, cover the entire building field.
Send in the coupon and you may find something new and good for the new home you are planning.

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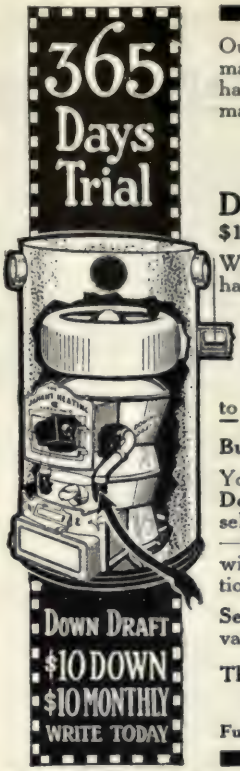
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You can install the **Jahant Down-Draft Furnace** yourself. We send complete outfit—furnace, pipes, registers, etc. with special plans, full directions and the necessary tools.

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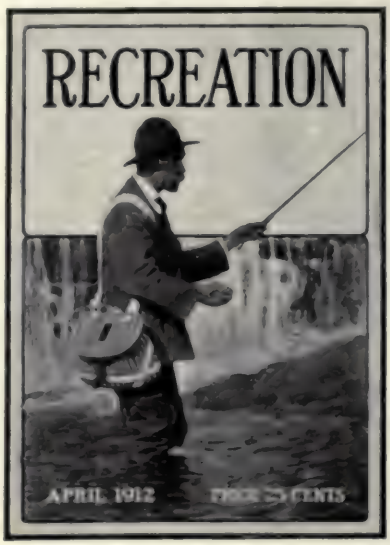
Look closely at this illustration.
See how the fibres of wood are hooked down, firmly holding the fresh driven nail.
But unless this nail is proof against rust the hole will be enlarged. Frost and moisture penetrate. The wood fibres decay. The nail loosens and literally falls out.
Now multiply what happens to one nail by what happens to all the nails in your roof, fence or clapboarding.
And you have the reason why work nailed with ordinary steel and wire nails, thinly coated nails and "galvanized" nails, does *not* last.
And you have the reason, too, why it is *not* economy to use such nails.
By paying a little more you can get "MIFCo" heavy zinc coated nails.
Every hundredweight of these enduring nails is coated with 12 pounds of pure zinc. And zinc, like copper, is indestructible.
Builders' stories and the drawn nails themselves prove that "MIFCo" nails, driven in shingles 29 years ago, are free from rust.
You who use nails—farmers, builders and architects—don't spend a cent for any nails till you learn all about "MIFCo" brand.
If your hardware dealer isn't supplied send us your name and address.
We'll send the nearest dealer's name and an interesting booklet.

MALLEABLE IRON FITTINGS CO., Branford, Ct.

RECREATION'S BIG FOUR

APRIL ::: MAY ::: JUNE ::: JULY

These four numbers of RECREATION are popularly known as the "Big Four." They contain just the sort of information desired by those who are interested in fishing, hunting, canoeing, motorboating, camping, and other delights of the outdoor season



RECREATION for April will make any outdoor man glad with its variety of interesting matter and superb illustrations. Here are just a few of the good things in the April number:

"How to Live Comfortably in a Tent," with photographs and description of the best tent for a permanent family camp. "The Leetle Cabane" is a story of a stone recreation cabin built at a cost of less than $50. Illustrated with pen and ink drawings and with plans. "A Mississippi Cruise" tells about the building of a boat used for a family home on a cruise from St. Paul to New Orleans. "Transcontinental Automobile Touring." Illustrated with photos of a trip from New York to Los Angeles. "Spring Fishing at Sebago." A story of fishing for the famous land-locked salmon when the ice goes out. "Aeroplaning Unawares." An experience of the runaway sort with an untried aeroplane in a young blizzard. "The Dinner-Plate Shoot." An innovation in long range revolver and rifle target shooting, cheap porcelain dinner plates being used for the targets. "Week-End Walks of the Sierra Club." "Public Shooting Grounds."

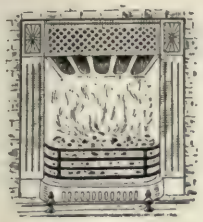
Then there are a dozen and one other articles, each full of information and human interest, and most of them copiously illustrated.

The May, June and July numbers will be wonderfully good: they are the great vacation numbers which every outdoor man should read.

OUR "JUST TO GET ACQUAINTED" OFFER

We want you to know RECREATION, and offer you an opportunity to get acquainted at small expense. RECREATION is 25 cents a copy, but we will mail you the BIG FOUR—April, May, June and July numbers—as published, for only 50 cents. If to Canada, 60 cents

RECREATION, A-24 W. 39th St., New York



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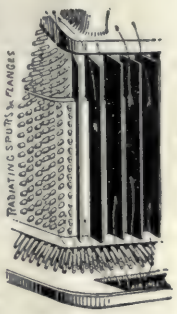
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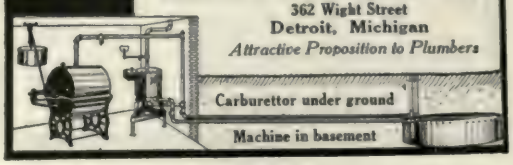
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KEITH'S MAGAZINE

ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

THE JOURNAL OF MODERN CONSTRUCTION
IDEAL HOMES MAGAZINE

M. L. KEITH, Publisher, 426 McKnight Building, Minneapolis, Minn.

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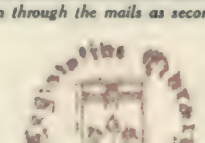
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CEDAR CREST—A BOULDER BUNGALOW IN OHIO.

KEITH'S MAGAZINE

VOL. XXVII MAY, 1912 No. 5

A Boulder Bungalow in Ohio

Designed by Mrs. Geo. Winchet

THE boulder bungalow at Cedar Crest was planned by its owners as the simplest form of shelter for four people and their guests in summer. When enthusiasm for the surroundings increased, it was decided best to give up the city home altogether. The simple plans were still retained, with the heating apparatus added for winter comfort.

The agricultural student of the family needed a farm for his experiments, and this farm, only eight miles from the city, was chosen for the beauty of its so-called "waste land"—a bluff, a riverside drive, twelve acres of original forest and two picturesque ravines. A knoll, overlooking the river on the west, was surrounded by the forest stretching to the top of a ridge that separated the park-like woods from the fields of the farm. On this knoll the house was built.



The Dark Green Cedars Against Snowy Slopes.



In Winter Snows.

The exterior is of plaster, boulder columns and chimney, and red tile roof, with eaves of blackish green and gray green blinds. The only unusual features were the divisions of the blinds on a line with the stained windows, and the front door was constructed with the idea of avoiding all stock patterns.

The porch is the real living room in summer, as some part of it is well shaded at all hours; and it is seldom exposed to storms, as it faces southeast. A storm door with its vestibule has never been needed even in severe winters.

The living room is thirty-one feet by fifteen and a half; the mantel of bluish

brick and the bookcases fitting into the room. The walls are tinted a pinkish tan. The woodwork is cypress with single paneled oak doors stained medium brown. The stained sections of the windows are opalescent, with touches of mahogany, the predominating color of the furnishings.

The hall and dining room are tinted in burnt orange, the woodwork stained a very dark brown to match the black walnut furniture. Under the high casement windows are china closets, linen drawers and shallow drawers for silver. A plate rail, eighteen inches from the ceiling, holds bric-a-brac for which other space could not be found. The cream tint of the ceiling was brought down to the plate rail, forming a good background for the pieces.

The bedroom is tinted robin's egg blue, with the woodwork stained a very dark green.

The kitchen is compact as a Pullman dining car, so that the preparation of meals requires few steps. Above the ice chest is a spacious fruit closet. The room is too small for a table, but sliding shelves projecting above the closets beneath windows serve the purpose. On each side of the sink are the tops of flour closets and the case of drawers, each a substitute for a table. Above an open space of eighteen inches, enclosed china closets on each side reach to the ceiling. Near the stove is a closet for kitchen utensils and convenient shelves, part of them covered with zinc.



A Walk Among the Cedars.



A Morning Row.

* * *

For more than a year our cooking was done on four German burners for alcohol. Since these frail burners were worn out an oil stove has been used, but we are waiting impatiently for stronger burners to be placed on the market so that we can return to the use of alcohol.

The rooms in the second story are tinted in harmonious colors, and the woodwork of cypress and pine is in its natural color with a dull varnish surface.

In the basement, we have furnace room, laundry, workshop and storeroom. The acetylene plant and the gasoline engine each has its own house just outside the foundation walls.

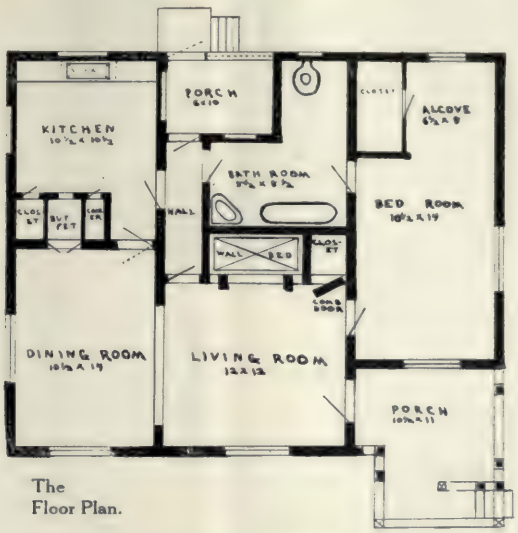
* * *

In the boyhood of an elderly neighbor, there was but one cedar in this entire region. On the river bank "The Cedar Tree" was then the rendezvous of all the small boys. It still lives, although

much broken; and the birds and wind have so scattered its seeds through our forest, that fifty sturdy trees may be counted from any window. In summer the forest trees predominate, but in winter the green and brown tones of the cedars against the snowy slopes form

Cost of Cedar Crest.

Excavation	$50.00
Foundations, etc.	540.00
Lumber	1,643.00
Plaster	422.00
Painting	140.00
Hardware	135.00



The Floor Plan.

Plan of bungalow on page 345

beautiful pictures, proving Cedar Crest the best of all names for our home.

There is a deep satisfaction and pride that lingers about a home planned and built by its owners. Every room means something; every corner is a large part of the whole. Those who have never built their own home cannot half realize the joy that we experienced in the planning and the fulfilment of our hopes.

Stone work	231.00
Plumbing	310.00
Roof, etc.	400.00
Carpentering	608.00
Decorations	238.00
Metal weather strips	76.00
Lightning rods	28.00
Gas machine and fixtures	238.00
Total cost	$5,059.00



Suite of Bedroom Furniture in French Style, Berkey & Gay, Manufacturers. Ivory Enamel with Cane Panels Inset. Price of Twin Beds, $60.00 Each; Large Dresser, $80.00; Dressing Table with Triple Mirror, $75.00; Writing Table, $35.00; Somnole, $30.00; Arm Rocker, $23.50; Side Chair, $19.50. The Rugs and Drapery Materials Are in Pastel Shades of Rose, Green and Ivory.

Shown by Courtesy of Moore & Scriver, Minneapolis.

Things New and Old in Bedroom Furniture

FOR the woman who like Agur, has neither poverty nor riches, who wishes to furnish her home with charm and in good taste, the selection of her bedroom furniture is always a question of absorbing interest. In this part of the furnishing she is usually the sole arbiter of her fate; for though the man of the house may and often does express decided convictions on the furniture of the main living rooms, he seldom ventures into the essentially feminine atmosphere upstairs.

Fortunately it is a comparatively easy matter in these days to furnish in good taste. The abominations of even twenty-five years ago have been almost utterly eliminated from our furnishing establishments, and really beautiful reproductions of fine designs by the master craftsman of 200 years ago can now be found in almost all the shapes. True, there is still on sale the golden oak "sets" that are the pitfalls of the limited purse. For it must be confessed that this is the only cheap furniture unless one takes a good deal of trouble. If one has time for it, almost anything can now be ordered "in the white"—that is, unfinished, and the home craftsman can do the staining or the enameling herself. But this requires much patience and some skill. One must have a deft hand and a good back. But the result is well worth while. For instance, the writer knows a sleeping room of so much charm that no one enters it without comment and exclamation. To be sure, the walls are covered with grey roses having hearts of pinkish mauve. The rug is grey and mauve, the windows have side hangings of thin mauve silk over the ivory net. But all this would be naught if the furniture were oak or cherry, or even that other abomination, an enameled iron bed. First, the woodwork is painted the soft grey of the roses and the hardware and light fixtures are dull silver. The maple floor is stained a darker grey than the rug. The wood bed is on extremely simple lines, with slatted foot and head pieces, and this and the low dressing table and chiffonier came in the white and had two coats of paint and two of grey enamel put on by the owner of the room. She also had ordinary double strength window glass cut to fill the top of the dressing table, with French cretonne in grey and rose and purple underneath, the same cretonne upholsters the stool in front, the little grey enameled wicker sewing chair and a round mat for the wicker table which is stained deep mauve. The bed cost $8.00 in the white, the dressing table $20.00, the chiffonier $15.00, the chair and table $5.00 each. Now $50 would not even get the golden oak "set." Fortunately we are not all so hedged about by a limited purse, and for these lucky ones there is only the matter of good taste and judgment in selection.

First, there are the ever fascinating reproductions of Chippendale and Sheraton antiques, which it is now almost impossible to distinguish from the originals. Whether one has a strictly colonial house or not, nothing furnishes a bedroom so handsomely or is so substantial for all-around use, as mahogany in the dull finish in these shapes. If the decorations of the room are rich rather than dainty, pieces of Chippendale design are

Colonial Pieces in the Heavier and More Massive Chippendale Type of Design. The French or Napoleon Bed with Rolling Head and Foot Board. The Chippendale Chest of Drawers and the Dressing Table Also Chippendale. A Dressing Table Like This Costs $45.00.





This Chest of Drawers Would Be More Attractive if Equipped with the Old Pressed Glass Knobs So Popular in the Victorian Era. Such a Chest of Drawers in Mahogany Would Cost $75.00.

a good choice. Some of these are shown in the second group of mahogany furniture. While much mahogany furniture has brasses for handles, the glass knobs, exactly copying the old pressed glass knobs of our grandmothers' bureaus is the fancy of the house, occasionally one sees mother of pearl. Sometimes one finds black walnut pieces of good lines and agreeable tint that are quite as desirable as the mahogany, and often discarded old walnut pieces can be made really fine by sawing off or ungluing the old "ornaments," leaving only the main outlines, and applying sandpaper, stain and wax. There is, too, the Circassian walnut furniture, now having a great vogue; but to our mind it does not compare with mahogany for bedrooms, though costing fully as much. With cane panels inset, it is beautiful, but such a bedroom set consisting of twin beds, dressing table, chiffonier and chairs, mounts up well into the hundreds in cost. When made up perfectly plain in the Craftsman style it is not specially pleasing, and the grain of the wood is apt to have a striped effect that is unlovely. When used for bedrooms it is best combined with the dull blue and rose of some of the imported cretonnes.

To return to mahogany. If one desires grace and light effects the Sheraton pieces shown in the third group would be the choice. Such furniture shows well against the soft tones of the chambray papers combined with pastel shades of rose, blue and green. The modern high-poster is much modified from the heavy tester beds of our colonial days; the posts are slender and sometimes short, ending in carved pineapples. Such beds are delightful dressed in striped dimity with a narrow finishing fringe, especially if there is a flowered wallpaper. The bedroom table may be the tip table shown or the quaint sominole with its brass or glass candlestick. If one wishes to carry out a colonial room a wash stand should be in evidence, with wash bowl and pitcher in heavy colonial glass. These sets are admirable with cretonne furnishings. A desk or couch is not admirable in such a room, nor should there be a lot of small pictures on the wall. Some of the charming domestic rugs in the coloring of the room would be the choice for the floor.

The vogue for white furniture or enameled in delicate shades has been growing for two or three years. Not only for bedrooms is white furniture in high favor, but for dainty drawing rooms. Quite unusual is a complete dining room set of white enamel costing several hundred dollars and intended for a period room.

Just here we are concerned with the bedroom furniture only and a very elegant set of the very latest in this class of goods is shown.

The set shown is of whitewood finished in ivory, with panels of greyish white cane inset and handles of brushed brass. The picture shows the graceful outlines, but not the elegance of the finish. The dressing table has the mirror in three sections, the sides hinged, so that a view at any angle is possible. The draperies combined with this set are French cretonnes in pastel coloring, and the rugs are in deeper tones of the same coloring. This ivory furniture is also very good in connection with some of the decorative cottons in Oriental designs such as our grandmothers used to copy in crewel embroidery.

Other white furniture is of simpler outline and decorated with small, painted medallions or panels. Some of these are delicate enough to suggest cameos, others are carved and picked out in greenish blue. These latter make a fine effect when combined with chintzes in green and blue on a white ground.



The Illustrations in This Group Are the Quaint Field Bed, the Sheraton Chest of Drawers and the Tip-Table.





The Cost of Such a Dresser in Mahogany Is $60.00.



Twin Beds Like the Illustration in Mahogany Would Cost About $75.00.
A Birch Imitation Is Sold as Low as $16.00 the Single Bed.

Berry Culture for Home Grounds

By H. W. Jenkins

FEW people who buy berries know the true flavor of the best varieties, when rightly grown and left on the plants or cane until fully ripe, and many who grow berries in the kitchen garden are not getting the most out of them as regards size and quality. I wish to describe some methods I have worked out in my own garden work. For most people there is no berry or fruit that can take the place of the strawberry, but we cannot have them all summer, and we may have to follow them, better raspberries and blackberries than most people have eaten. I wish my readers to think of having a large dish of Cuthberts (red) and Golden Queen (yellow) raspberries that are nearly as large as strawberries, mixed, so they make a handsome appearance as a dessert fruit, and also that are of the quality of the hardy raspberries, and are luscious because left on the canes until ripe. Delicate and sensitive stomachs can digest such berries, when the ordinary commercial berry picked when partly ripe, so it will carry well, could not be safely eaten.



Raspberries, Blackberries and Strawberries Should Be Bought in Small Orders and Propagated in the Home Nursery.

First about strawberries. I would begin rightly when planning a new bed of strawberries for home use, by learning which are the best berries that are being

successfully grown in my own or a similar locality, and when I had decided which varieties I wanted, if I could not get them of a neighbor, I would order them of the nearest reliable nursery, in lots of a dozen or fifty, and set the plants in a propagating bed made in my garden where the soil is mellow and fairly rich. From an experience of over thirty years, I know that time will not be lost in so doing, for strong plants freshly dug, grown in my own beds and rightly set when the leaves first start in the spring, will every one live and grow almost without check.

In the propagating beds I set the plants in rows three feet apart and eighteen inches in the rows. A bed a rod or two square should furnish sufficient plants for the family strawberry bed, and have some to spare for your neighbors. Every spring a new propagating bed should be set. The first runners that grow are best. Let them cover the ground, but thin out the small and late plants so the early plants stand a few inches apart.

While growing the plants, prepare the soil in which to set them the next spring. If the soil is in fairly good condition, we are learning it is needless labor, and a waste, to apply large quantities of stable manure to the strawberry bed. The soil is rich enough for large dessert strawberries, that will grow a good crop of corn. The main essentials are good drainage, plenty of humus, and such good tilth that when you take up a handful of soil, there are no lumps, and it all crumbles in fine particles. The ideal soil is clover sod, where clover grew good last year.

When the strawberies are gone, we want the best cultivated raspberries that can be grown. There are some principles in raspberry and blackberry culture that must be understood and worked out to obtain best results. I would plan for these in much the same way as for the strawberries, by ordering from the nursery the desired varieties. For the family garden in South Eastern New York, I would select the following: red, Cuthbert; yellow, Golden Queen; purple, Shaffer's Colossal; black, Greg and Kansas. The following is my choice of blackberries: Snyder, Taylor, Eldorado. It is well to ascertain what varieties are thriving well in one's own locality. I would order from the nursery in lots of one dozen or fifty, set them in propagating beds, and grow plants from them. No time will be lost in waiting, for the plants one grows at home will all grow when transplanted, with but little check.

While waiting for the plants to grow, I would prepare the ground for them the same as for strawberries, and, as for them, the clover sod is an ideal place. When the plants are ready, and the soil ready—I would prefer to plant in the spring—I would prepare the plant bed by thorough plowing and harrowing. Then furrow seven feet apart for raspberries, and eight to ten feet for blackberries, and try to transplant before the suckers start on the plants, and set three to four feet apart in the row. A cultivated crop, as corn or potatoes, can be grown between the rows the first year. The second year, let the sucker varieties fill the rows so the plants stand about one foot apart, except in one row, or part of row, where one wishes to propagate plants. If the variety has proved hardy, grow each cane in the tree form, by pinching off the tip when about four feet high, and shortening the arms or laterals later in the season. If this plan is practised, a support will be needed and the one shown in the photo is a good one. It is made by nailing arms on posts, and nailing wires to the ends, so they support a row of canes on either side.

When a crop is harvested, the old canes should be removed at once. This is very important, as the new canes will

grow much faster, and will harden up more, and be in better shape for winter. When the old canes are taken out, the new ones should be pruned, but the thinning should be done earlier or at the time of the first cultivation, the last of May or in June. The most successful growers of cane fruits, cultivate with horse cultivator and hand hoe frequently all summer. A heavy mulch of straw or strawy manure placed between the rows in July retains moisture, and insures a better crop.

Selecting Flower Seeds.

For a sunny exposure, the California poppy, eschscholtzia, will endure midsummer heat and drought without flinching. The colors vary from pure white through yellow and orange to scarlet, with the satin sheen peculiar to the poppy tribe, while the foliage has a whitish



Pruned Raspberries in the Rear with Support of Posts, Arms and Wire.



Blackberries.

cast which is especially in harmony with the blossoms.

For a boutonniere there are few blossoms which equal the old fashioned bachelor's button in white and the various shades of blue. It has the happy faculty of keeping fresh for hours.

For rapid growth the kudzu vine excels, well established plants sometimes attaining a height of fifty feet in a single season, and furnishing a dense shade. If grown from seed, ten or twelve feet is perhaps the limit the first season.

The calendula will endure more frosts without complaint than any other annual, offering a pleasing variety of the different shades and combinations of yellow.

If you wish to conceal the garden fence, plant sweet peas or a row of hollyhocks.

Portulaca is fine for covering a sunny spot, the succulent foliage being a most successful resister of drought.

The calliopsis is showy when grown in masses, the long, slender stems rendering it admirable for cutting.

The branching varieties of aster are preferable to the compact sorts. Lavender and white make a charming combination, while pink appears without a rival for third choice.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

A Bungalow Built and Furnished for Two Thousand Dollars

By Chas. Alma Byers

THE man of small means a few years ago, when contemplating the building of a home, considered or usually considered only the necessity of having a house to "live in." This was not necessarily because he lacked pride or taste, but because he looked upon the beauty-lending qualities as luxuries costing money that he could not afford to spend—a very good excuse, since he was sincere in the belief, for making his house plain and frequently even ugly. The modern home-builder has learned, however, that it costs no more to build a house that is picturesque, tasty and architecturally attractive than it does to build a house that serves only as a creation in which to live.

The house itself complete, with gas and electric connections and fixtures, costs $1,600, including the architect's plans and other services. It has a frontage of 36 feet, and extends back 30 feet. It contains four rooms—living room, dining room, bedroom and kitchen—and a bathroom and a front and rear porch, being a house one story in height.

The house is designed on the style known locally as the "California cottage," which is an outgrowth of the 'California bungalow." This means that the house is built, with the exception of the weather boarding, of dressed lumber, instead of undressed; that the walls inside are plastered, instead of being covered with burlap; and that in several other ways it is more smoothly finished than the genuine bungalow.

The house is built throughout of Oregon pine, with the exception of the doors, which are of solid oak, subjected inside and out to the Flemish treatment. Oregon pine is a soft, white pine that takes readily either a paint or stain, and at present sells, in Los Angeles, at from $18 for framing to $34 for finish per thousand feet, a little less than at the time this house was built.

Externally considered, omitting such facts as have already been given, the

house is stained bungalow green, with a lighter trimming. The roof has a quarter pitch, and the eaves have a universal projection of two feet. The front porch is 10½x11 feet, filling out a corner 10½x7 feet and projecting 4 feet beyond the front line of the house. It is fully parapeted, and the steps lead to it from the side. The rear porch, which is provided with stationary wash tubs with running water, is 6x10 feet in size, and is screened.



THE PRETTY BUNGALOW.

The interior arrangement is shown by the accompanying floor plan. The living room and the dining room extend across the front, the one door leading from the front porch opening into the former. The two rooms are connected by a broad arch hung with portieres, which enables their being converted into virtually one large room. The living room is 12x12 feet in size and the dining room is 10½x14 feet. They are finished exactly alike, the walls of each being tinted dark green, bordered above a molding that extends around the rooms on a line with the top of the doors and windows in cream, which corresponds with the ceiling. The woodwork, of Oregon pine, is stained to resemble Flemish oak, while the floor, also of Oregon pine, is hardwood finished. The lighting fixtures, combinations for both gas and electricity, are of brass, provided with frosted glass globes and mantles. The living room contains but one window, while the dining room is provided with two, all uniform in size and with the lower half composed of a single piece of plate glass.

Brief mention should be given to some of the built-in features of these rooms. The living room contains a Marshall-

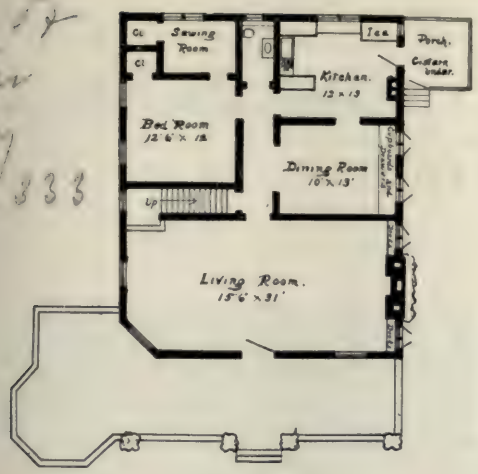


THE LIVING ROOM WITH BUILT-IN BED.

Stearns patent wall bed, built in the north wall, which, for a house of this size, serves as a convenience of no small importance when guests are entertained over night. The bed ordinarily fits into the wall so as to be unrecognizable as such, providing the room with bracket shelves and a mirror. At one side of the wall bed there is a door converted into a combination bookcase, writing desk and cabinet space for odds and ends, occupying respectively the upper, the middle and



SIMPLY BUT COMFORTABLY FURNISHED.

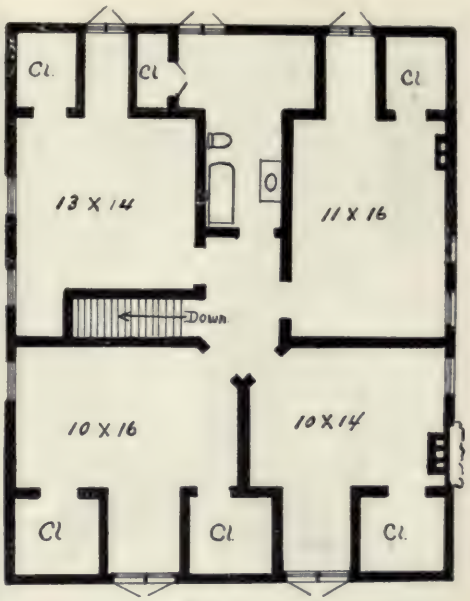


First Floor.

the lower portions. This door, when opened, discloses a roomy closet. The dining room contains a built-in buffet.

The sleeping room is located on the east, where it gets the morning sun. It contains three windows, similar to the ones of the living room and dining room —one each on the north, east and south, the last looking out on the front porch. The north end of the room is divided off into a sort of alcove, in one wall of which there is a large closet. The room proper is 10½x14 feet in size, while the alcove is 6½x8 feet. The walls are tinted blue, while the ceiling is cream, and the woodwork a shade darker of the same color.

The kitchen is square, 10½x10½ feet, exclusive of a space 7 feet long by 3 feet wide devoted to built-in coolers and the dining room buffet. There is a sink that extends entirely across one side of the room, which contains, in the lower part, a combination of flour bins, drawers and small closets. Above the sink there are two built-in cupboards, one with glass and the other with wooden doors. The room is lighted by three half windows, one of which looks out into the screened porch. The lower portion of the kitchen walls, two-thirds the height of the room, is of Alpine plaster with white enamel finish, blocked to resemble tile. The upper portion of the walls, together with the ceiling, is tinted pale green, and the woodwork is varnished pine. The floor is covered, like that of the bathroom, with linoleum clouded blue and gray.



Second Floor.

The bathroom is 5½x8½ feet, exclusive of the toilet that breaks into one side of the wall which makes the room L-shaped. The walls are finished, like the kitchen, with Alpine plaster, white enameled for the lower portion, and the floor is covered with linoleum.

A house of this size and kind can be furnished for a very small sum, probably as small as $300. To be more liberal, however, it can easily be furnished tastefully and harmoniously for $400, including kitchen utensils, stoves and everything necessary. Thus furnished, this home complete—lot, house and furniture —would cost $2,800, of which the lot at $800 forms a large part.

Wall Decoration with Paints and Tints

By Henrietta P. Keith



WISTARIA FRIEZE IN YOUNG LADY'S SLEEPING ROOM.

A DISTINGUISHED British architect recently read a paper before an Architectural club on the subject, "What Is Paint." He found himself in deep water, and the more he tried to define "paint" the deeper in he got. His definition of paint as "a self-hardening, homogeneous adhesive mixture, applied by dipping or by a brush," obliged him to include even a coat of tar. Nor did he get much help from the dictionaries, as these authorities with great unanimity defined paint as "coloring matter for the face, rouge, etc." In fine, the poor architect was much in the position of the hundred-legged spider who tried to determine which of his legs went before and which behind.

The American handling of the matter is much the better—for a paper on the same subject at Philadelphia recently, declared that "each manufacturer had his own idea of what a paint should be

composed of," and that there could be no one formula. That success in selling paint was generally taken to be a guarantee of its quality and that fair prices would always get from a reliable firm, a reliable paint. The increasing demand for rich, velvety, yet durable flat effects in wall decoration has stimulated the manufacturers to produce finishes in a variety and a beauty of color effects together with a perfection of surface undreamed of a decade ago. The home-builder has only to send for the booklets or portfolios in color, issued by the decorative department of the leading manufacturers of these finishes, to assure himself of the wonderful advance made in this method of decoration. Not only do the primary colors show great depth and richness of tone, but these can be modified by the painter by mixing and combining to produce an infinite variety of attractive shades, so that any scheme of decoration can be carried out. Full directions for these modifications are furnished in these portfolios of designs.

In one thing the essayists are all agreed, viz.: that "the function of paint, is beautifying and protecting"—which brings us to the heart of our own subject.

Here again, is room for a wide divergence of opinion. An eminent English artist, Prof. Lethaby—a few years ago, advised that the whole interior of Westminster Abbey be whitewashed. We believe it was never done, but really, a coat of one of our white tints over those dingy, smoky old stone walls would not be half bad. Still, for many, the sacred gloom, is the more beautiful effect.

Without going so far as Prof. Lethaby, there are few interiors which are not vastly improved by some form of wall decoration. Moreover, to decorate is in our blood. We must diversify blank, empty space, and walls, because they are blank spaces and they are wonderfully alluring to this instinct for decoration. Then, each home-maker desires to make his home as attractive as possible, and



Stencil Design for Panel Decoration in Gray and Rose Color.

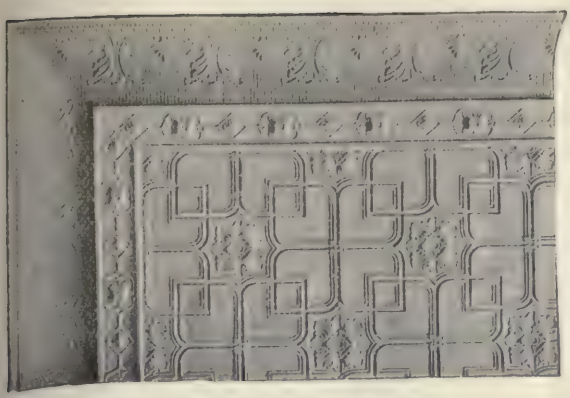
here is where the second function of paints and tints comes in, for this decorative function is "the arrangement and disposal of colors, in such a way as to beautify what is decorated."

Since a concrete example is so much more understandable than abstract theories, we here show, as well as the black and white can do it a very beautiful example of a room decorated in paints and tints. For in the treatment of this room both mediums were employed; a flat-tone ivory paint upon the wall surface below the card rail, because this medium combined both the decorative and the protective functions—and a water tint of the same ivory tone, above the card rail and on the ceiling. The very word "ivory" suggests something decorative; and on this charming background the artistic and dainty Wistaria frieze in softest, shadowy, greyish mauves, droops and winds it trailing loveliness around the top of the wall. A lighter garland of the vine outlines the ceiling just above the main frieze, and together they form a most perfect decoration. In both frieze and garland, the young opening leaves of the Wistaria in faint, tender green, is woven in among the shadowy purple flower racemes. Of course, only a real artist can do a decoration like this, every part of it free hand work, the beautiful frieze growing under his own fancy and trained eye and hand as he worked.

And since we cannot all have such an artist to do our walls, first because they come high and second, are often unobtainable at any price—let us be glad that we can now obtain very charming stencil designs to use as frieze decorations upon either tinted or painted walls. So wide a demand for helps of this character in decorating has sprung up in the last few years that the manufacturers of interior paints and tints have put forth a great variety of designs, many of them most artistic, both in color and drawing. Working patterns are furnished for these, also the proper color materials for carrying them out and full working directions for applying, so that even the



PLEASING EFFECT OF PLAIN WALLS AS A BACKGROUND IN CRAFTSMAN INTERIOR.



Metal Ceiling in Tudor Style Tinted Ivory.

untrained workman can successfully manage the more simple subjects. Special advice is furnished by their decorating departments upon application. The panel treatment here shown is an extremely pleasing instance of stencil decoration. The ground of the panel is a soft grey shade and the design is carried in a darker tone of grey and rose. Such a panel treatment could be used below the plate rail of a cottage dining room or as a bed room decoration. It is both simple and decorative. When the stencil decoration is carried out upon curtains, table scarfs, etc., as is now the vogue, the decorative effect is greatly enhanced.

For those with some skill and experience in handling colors and the brush in other lines of art work, it would be only a pastime to apply on their home walls the more elaborate frieze design shown in illustration.

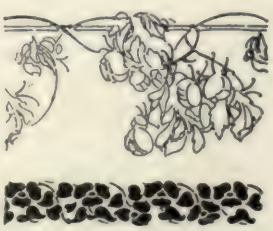
A flat finished wall in a soft and velvety tone of color with an attractive stenciled border or frieze is an exceedingly satisfying form of decoration. Moreover, when this frieze design is carried out upon curtains, door hangings or table runners, the effect is refined and harmonious.

A consideration which adds to the desirability of these designs is the fact that they can only be procured from the decorative departments of the manufacturers and one can, therefore, be assured that their decoration will not become commonplace and ordinary.

Then, again, there is a wide and growing sympathy with plain walls as backgrounds for the furniture, the pictures and art treasures of the home, rather than walls which claim first attention, by their own ornamentation. The simple lines and flat surfaces of the craftsman style of dwelling have a large following. They suggest the Japanese characteristics which are agreeable to many. The craftsman room here illustrated shows to advantage this refined treatment. In this room the side walls are treated with a greyish olive green tone of flat paint, while the ceilings are cream color. The dark oak woodwork is an excellent foil to the green and cream which is carried into the minor details in a charming manner, the rug being two tones of olive green. A stencil design in green decorates the cream table runner and on this is placed a book bound in rich green ooze, with a jar of green pottery. It is such nicety in detail as well as proper proportion of color, which produces the effect of charm.

Nor is the decorator limited in effects by the use of plain surfaces. The possibilities and combinations are endless. Here for example is another interior, widely unlike the one just described, but equally fascinating. The owner of this unusual home had a "fancy for a grey wood finish which would combine with furnishings of blue of various shades.

The wood trim of Oregon spruce is finished with a blue-grey stain, the mantel,



Stencil Designs Very Much Reduced.

ceiling beam and stairs the same. The beauty of this wood finish is even greater by artificial light, where it takes on all the variations of color tone between pearl grey and indigo.

As a ceiling treatment, flat paint and tints are far and away superior to any other form of decoration; and even where paper or other textile fabrics are used for side walls, nothing is so satisfactory for ceilings as these soft, tender tones. A metallic ceiling such as is here shown is the acme of elegance in a handsome hall, when treated with an ivory paint or tint. They are the only finish for sand float plaster walls or ceilings, giving an effect of great depth and velvety softness upon such surfaces. There are many situations where these waterproof flat finishes are invaluable, as for instance, upon the composition wall boards now so much in vogue, both for remodeling old interiors and as the whole thing for bungalows and summer cottages.

Not only does the esthetic side of plain walls as a background appeal to the taste of many, but the hygenic considerations are much considered in these days. Time was, when the "stuffy" smell of houses whose wall coverings had not been changed for twenty years, did not offend us as it does now. The writer in truth, has often been in a handsome house, where the drawing room wall has been hung with a silk tapestry for more than twenty years, and it is the proud boast of the owner that it is as beautiful as ever. So it is; and in this particular instance there is no offending mustiness, because the hanging is put on with tacks and moldings. But it is far otherwise with an old, paste-spread wall. A decoration which is not afraid of soap and water, and is not injured by washing is, therefore, most desirable to many.



LIVING ROOM OF BLUE AND GRAY OF RESIDENCE IN PORTLAND, OREGON.

On account of this washable quality, a flat finished wall is also economical, even though the initial cost should equal that of first class wall paper decoration.

EDITOR'S NOTE.—For the illustrations used in this article we are indebted to the New England Furniture & Carpet Co., Alabastine Co., Lowe Brothers, Northrop, Coburn & Dodge Co., Sherwin-Williams.

Concrete for Remodeling Old Houses

By Benjamin Baker

IN the matter of looks there is between the house with clapboards and stucco somewhat the same difference of effect that there is between a figured cloth, or cloth with a pattern, and a plain broadcloth. The close parallel lines of a clapboarded surface, with the variations of color that are produced by shadows on it, especially if it happens to be painted a warm color, give an effect like that made on the appearance of a garment by lines or checks or a pattern of a different color from the main body of the cloth. Such a garment may look warm, comfortable and costly, but if you see it a good many times a day, for many days in succession, the abundance of pattern is apt to wear on you—you get tired of it, and welcome a plain broadcloth garment, whose severity of surface and sparing ornament proves less tiresome, and more dignified and substantial in appearance than the elaborate-figured stuff. The change from paint and clapboards to stucco is like the change from the patterned cloth to plain broadcloth. Stucco does away with corner-boards and base-boards. The sides of the stuccoed house are not frames for a multitude of lines in clapboards and window-casings, but broad, solid surfaces of an unobtrusive color, and of a texture



HOME OF MR. FRANK BOURNE.

that stands for stone—for solidity, and for all that solidity can mean in impressions of permanence and of protection from heat, cold and fire. Everyone knows that a stone house looks more permanent, like a better protection to its inmates, than a wooden house which of greater permanence and slighter need of repairs. Stucco make a frame house warmer. Properly applied, it substitutes for the thin layer of clapboards, which are often laid directly on the sheathing, first, an effective layer of waterproof paper, then an air-space, and lastly an



The Picture on the Right Is That of a House Done in Concrete Upon Exactly the Same Plans as Were Used When Constructing the House Shown in the Photograph Below. These Pictures Afford an Opportunity for Comparison.

may, in point of fact, be much the warmer of the two.

The practical advantages of stucco are many and important, and the relatively low price for which these advantages can be had will be appreciated from the statement that a reliable stucco, applied as will be later described in detail, can be secured under present conditions as to cost of labor and material for about $1.25 per square yard. This is more costly than painting—even more costly than new clapboards, but the greater cost is made up for almost in the single element air-tight, slow-conducting layer of cement about an inch and a quarter thick. As a protection against heat and cold, stucco is superior to back plastering, whose efficiency is well known. As a fire resistant it is infinitely better than any sort of painted wooden surface. The only repairs needed are the filling of slight cracks, which are rare in properly-laid stucco. For its endurance, let us take testimony from the house of Mr. Frank A. Bourne, a Boston architect.



This house was remodeled from an almost barn-like structure in 1878, and

stuccoed. The only repairs on the outside surface since then were made in 1905, when Mr. Bourne bought the house. The only damage then consisted of a break evidently made by a succession of blows, probably the result of boys using that particular piece of wall as a stop for their baseballs. There was no damage from the effects of weather. The wire lath exposed by the repair work was not corroded. Excepting this mechanical damage, the stucco of the house is just as it was when first laid, and is in first-class condition, more than thirty years after it was put on. The greater first cost vanished long ago in the freedom from repairs. It is probable that most well-kept frame houses have cost more than a dollar and a quarter a square yard for mere painting in the course of thirty years. Of course stucco, like any other kind of work, must be "done right" if it is to be a good investment.

Concrete is not of itself any more proof against the slow percolation of water than any natural building stone of the same closeness of texture, and the waterproof paper over the wood sheathing is therefore absolutely necessary. The concrete itself may be waterproofed on the outside, however, by the fairly simple formula known as the "Sylvester Process," which is used by the federal government engineers on fortification works subject to contact with standing water. The material used consists of two solutions. The first is a solution of shaved Castile soap, three-quarters of a pound to one gallon of water. The second is an alum solution, half a pound of powdered alum to four gallons of water. The soap wash is applied first with a flat brush, at boiling heat, care being taken to avoid froth in the laying on; the wall must be dry in preparation for this coat. After the soap coat is thoroughly dry, having stood not less than twenty-four hours, the alum wash is applied in the same manner, at a temperature of about 65 degrees; and this also is allowed to dry for twenty-four hours. Generally, two or three applications of the two solutions are needed to make the concrete perfectly impervious to water.

Construction Details of the Home

Plumbing

Sanitary Methods, Fixtures and Piping.

THE plumbing system of the house consists of the necessary fixtures, their water supply, drainage and ventilation. Sewage is disposed of by sewer or by cesspool or septic tank. Septic tanks are constructed under patents controlled by certain manufacturers who furnish complete information as to their operation. Cesspools may be constructed by anyone and of various materials. Cement is used in which two components are made, in one of which the solids are retained and from the other the liquids flow away into the soil. The solid must be removed from this style as necessity requires.

Another method consists in laying up a dry wall of stone through which the liquids escape, and requires cleaning very seldom if of a reasonable size in a porous soil.

The vast majority of cesspools constructed are of wooden plank, notched at the corners to hold without nailing. A few plank are put in position at a time and the earth removed, allowing them to sink into the hole. More planks are

added until a walled up hole twenty feet deep is constructed.

In these forms of construction oftentimes no vent is installed, but might be put in to advantage if the climate is not too cold. A tree or fence is sometimes used to carry up and conceal a vent from such a place.

Sewer Pipes.

Glazed earthenware pipes, four inches or over, are used between the house and main sewer or cesspool connecting with the castiron drain pipe, from the interior, three feet outside the basement wall. All exterior joints between lengths of earthenware pipe and their connections with cast iron pipe is made with Portland cement, care being taken to produce a smooth joint inside.

Connections With Rainwater Leaders.

Rainwater leaders from the outside of the building should be at least three inches in diameter and be properly trapped before entering sewer or soil pipe. If connected inside the building, the pipe should be extra heavy cast iron, turned inside and outside with traps easy of access.

If the rainwater leaders connect with the main run of the sewer in basement on the house side of fixtures, all basement fixtures should have backwater valves on the branch runs, between these fixtures and the main run.

Soil Pipe Drains.

Four-inch extra heavy cast iron soil pipe should be used for inside drains and extending three feet outside of foundation walls, with a fall of not less than one-quarter inch per foot to sewer. All cast iron pipe and fittings should be thoroughly coated inside and outside with coal tar applied hot.

There should be a four-inch clean-out, with screw cap, at the foot of the vertical run and another near the outside wall unless they would come within ten feet of each other, in which case only the latter is required. If the clean-out is below the floor it should be boxed.

House Trap.

There is a trap placed just inside the basement wall where the drain leaves the house with a fresh air inlet pipe from outside above grade, attached close to the trap on the house side of it. In cold climates the fresh air inlet freezes the trap and neither is allowed. All pipes and fittings should be securely fastened to wall or ceiling with iron anchors to properly support every joint.

Soil Pipe Stacks.

Where one or more water closets are drained the soil pipe should be extra heavy cast iron, coated, not less than four inches inside diameter. It should be continued of full size, twelve inches above the roof and there be encased in a galvanized iron frost-proof jacket with an air space of one inch around the pipe. The top of the jacket should be made of cast or wrought iron, containing a testing plug properly caulked to the soil or ventilation pipe, to be removed after test is over.

If the vent pipe is carried into a ventilation flue the jacket will not be required. No vent should open near a window or other opening that would allow the gas to penetrate to the interior of house.

No trap is necessary at the foot of a vertical stack. No black wrought iron pipe or steel pipe should be used as soil, waste, ventilation or drain pipe.

Fittings.

All fittings for drainage should be recessed drainage fittings presenting smooth, continuous inner surface to the flow of drainage. Fittings for vent pipes may be the ordinary pattern of cast or malleable steam and water fittings.

Connections made in the run of soil or waste pipes should be made with "Y's," one-eighth or one-sixteenth bends, or

sanitary "Y-T's." Where it is impracticable to make offsets with the above fixtures, sanitary "T's" or one-fourth bends may be used.

Traps.

Traps should be provided with full-sized clean-out screws, plugs, covers or inlets which may be easily removed without damage to the pipe or disturbance of the ground or floor.

Lead traps and bends should be of not less weight than the grade known as "light" and of the drawn pattern. Lead pipes may be drawn of "extra light" weight.

Avoid traps having covers, hand-holes or cleanouts which are held in place by lugs or bolts, or have internal partitions or mechanical seals.

The depth of water in the seal of a trap should not be less than 1¼ inches and more in special cases. The trap should not be of less size than the waste pipe.

All traps, except anti-syphon traps, should be counter-vented from the sewer side of the trap.

Every sink, bath tub, basin, water closet, urinal, set of wash trays, or every fixture having a waste pipe should be separately and independently trapped with a water-sealing trap placed as near the fixture as practicable. Three wash trays set not more than six inches apart are considered as one set. All traps should be so placed that they can be readily cleaned.

Joints in Cast Iron Pipes.

Joints in cast iron pipes should be made with picked oakum, well forced into the joints with a caulking tool, after which molten lead is poured in and carefully caulked on its inner and outer circle.

Joints in Wrought Iron and Steel Pipes.

Joints in wrought iron and steel pipe should be made up with screw threads and all burns or cuttings on the inside of such pipes should be removed. The ends of pipes when used as waste pipes should be well reamed out before the joints are made up. All such pipes should be galvanized.

Joints in Brass and Copper Pipes.

Joints for brass or copper pipe should be made same as for wrought iron or steel pipes.

Joints in Lead Pipes.

Lead pipes on the sewer side of all fixture traps should be joined by wiped joints.

Joints Between Lead and Iron Pipes.

Connection of lead pipes with those of iron or steel should be made with brass ferrules, brass soldering nipples, or brass soldering unions with ground seats of a size not less than that of the lead pipe, with properly wiped joints and caulked or screwed into the iron pipe. But no slip-joints or washers should be used on vent connections.

Joints at Roof for Rainwater Pipes.

If rainwater conductors are placed on the inside of buildings, the joint connecting them with the roof of the building should be made with a brass ferrule and copper or lead connection.

Wastes.

Wastes should be of cast iron, galvanized wrought iron or steel, lead, brass or copper, and a fall of at least one-quarter inch per foot, greater wherever possible. The waste pipe from any other fixture should not connect to the house side, or in the seal, of any trap. Waste pipes from bath tubs or wash basins should not connect into the lead bend under a water closet, but in every case shall waste into the soil stack through a separate opening.

Refrigerator waste and overflow from tanks should not connect with any drain, soil, waste or ventilation pipe, but should

discharge into an open fixture properly trapped.

Size of Waste Pipes.

A waste pipe 1¼ inches in inside diameter is sufficient for one bath tub, wash bowl, laundry tray, urinal or refrigerator.

A 1½-inch pipe will care for from one to three of these fixtures, and a 2-inch pipe from three to six.

A 1½-inch pipe is sufficient for from one to two kitchen sinks, and a 2-inch pipe will do for from one to twelve sinks.

A slop sink should have not less than a 2-inch waste pipe. A water closet requires a 4-inch waste or soil pipe, and in determining the size of stack in like proportion, four minor fixtures count as one water closet, and two slop sinks count as one water closet.

Back Vents.

The traps of all fixtures should have back vents connected to the crown of trap whenever possible and in no case more than one foot from the trap. Where a continuous waste and vent system is installed, the trap should be set as near the fixture as practicable and the horizontal distance from the fixture to the stack should not exceed two feet.

No horizontal run of vent should be used between the waste opening and the water line of any trap, where a continuous waste and vent system is used, but should have an up-grade of at least 45 degrees.

Back vents should be of cast iron, wrought iron or steel, brass or copper, and lead pipes should be used only in making short connections between them.

Each vent pipe should have a trap screw soldered into it not more than six inches above where it connects with the trap, and this connection should also extend six inches above the water line of the fixture it serves before connecting with other vent pipes.

Where union joints are used on waste connections, no trap screw is required.

Vent pipes should be run as straight as possible with an up-grade to avoid trapping of condensation and if finally connected to the soil pipe, this connection should be not less than one foot above the highest fixture. When such connection is made in the attic, it should be made at an angle of 45 degrees if the distance exceeds fifteen feet. If this angle cannot be obtained in the distance, the vent should continue out through the roof of at least two inches inside diameter and be furnished with a frost-proof jacket as before mentioned for soil pipe. This jacket will not be necessary if vent is conducted to a ventilating flue below the first floor with a "Y" and eighth bend. The main vent pipe should connect into the vertical stack.

Flush Pipes for Water Closets.

Flush pipes from open flush tanks should be at least 1¼ inches in diameter and those from low down flush tanks should be at least two inches.

Tests.

After all parts of the drain, waste and vent systems are installed and still uncovered they should be inspected and tested to see that all is perfectly tight and properly placed.

All the lead openings should be soldered up and all the iron pipe openings should be closed with screw plugs except the hand hole fitting at outside wall where plaster-of-paris should be used. A suitable force pump is used to produce an air pressure of five pounds per square inch and is registered upon the air gauge with a one-fourth-inch connection.

The fixtures are next installed and the plumbing work completed. A final test is made equal to the pressure of one inch of water, after which the fixtures may be used.

Designs for the Home-Builder

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B 343 G. M. KAUFFMAN, Cleveland, Ohio.

Design B-336.

THE contributions for design section this month comprise a most interesting variety of homes of moderate cost. The house shown on the opposite page is a true to life picture of a five thousand dollar residence designed by Architect F. E. Colby. It is of the square, full two-story, hipped-roof type, inexpensive in design and quite plain in treatment. The first story is constructed of brick, the porch columns are massive square piers carried clear up to the porch cornice with a solid wooden rail. The upper story or belt course is finished in shingles.

The entrance is at the side, opening into a large vestibule, off of which is provided a coat closet and lavatory. There is a large living room, from which leads the main stairway, with fireplace located in the opposite end. A very good conception of the interior trim and arrangement of this room, with modest Craftsman mantel, is shown by picture of the living room here illustrated. The dining room opens from this living room through wide columned opening. The second floor is very commodious in bed room service, there being five rooms; four good sized chambers and maid's room, besides bath. Large closet space is a special feature, and each room opens conveniently off of the central hall. A most practical design in all of its features. Inexpensive of construction and a plan that will surely prove to be a very popular one with many.

Design B-337.

Here we have a home designed for all the year round, not so large a house and probably somewhat less expensive to build. The outside is treated for a cement stucco finish, the roof shingled and stained, suggested color scheme being red for the roof, all the trim in white, with the sash also in white, the cement left in the natural gray.

As in the first design, the front part of the main floor is given up to a large living room; in this case the fireplace being centered on the inside wall and the dining room opening from the living room by a plain cased opening; French doors open out from the dining room onto the sun piazza. There are two fireplaces in this house, but the one in the dining room can be omitted if desired, thereby saving from $75 to $100. A very pleasing detail of the living room is the projected window at the end with broad shelf. This is one of the designs where the regulation hall has been omitted, the stairs going up directly from the living room. Approach to the basement is down under the main stairs, and there is a rear stairway. Direct access to sleeping porch over the sun piazza is secured from the main hall, without passing through any of the bed rooms.

There is an attic stair to the third story, where the space may be fitted with a servant's room if desired, owing to the large dormers; a billiard room could easily be provided here. The inside finish is intended to be of hardwood

with hardwood floors, and the arrangement of the rooms suggests a Mission treatment for the finish. The architect, Mr. Chas. Sedgwick, states that contractors' bids, exclusive of heating and plumbing, varied from $3,700 to $4,300, including full basement and laundry.

Design B-338.

Another contribution in a Western bungalow of modest pretentions, designed by Keith & Whitehouse, of Spokane, Wash., gives us a pleasing contrast in the designs of some of the Eastern architects. There is a decided air of the forest to this little home, which is, nevertheless, not constructed of wood, but is intended for a cement plaster cottage. The porch columns supporting the pergola roof are first built up of wood, then metal lathed and plastered with the cement plaster, which is also used over the brick of the chimney and to form the finish for the concrete wall of the foundation where it shows above the ground.

Only a partial basement is planned for, the slope of the lot in this particular instance giving the opportunity of full sized windows and a door at grade. The usual requirement of a large living room in a house of this character is fully met with in this design, by a living room thirty feet long and four closets besides a linen case are an exceptional provision. Rough ten-inch siding is used on the exterior, and the gable supports are 6x6s left rough for staining. The detail, in fact, may be summed up in the one word, which means work carefully thought out —consistency. The house is plastered and is well provided with plumbing fixtures, having besides the bath room and kitchen plumbing, wash trays and toilets in the basement. The cost is $2,420.

Design B-339.

Another very modest little cottage home in the New England style of design is here presented. The gambrel roof treatment brought down low, forms the covering for the front porch supported by four heavy round columns. Examination of the floor plan shows careful study in the use of limited space. The main stairs lead off from a small hall at the left opening into the principal room of the house treated with a fireplace inglenook. The dining room is of very good proportion and size, 12x16. There is no pantry, but ample cupboard provision in the kitchen.

The architect, Mr. Newson, of Cleveland, has secured three bed rooms and bath on the second floor, with large storage and closet space. A commendable little design and one that will be sure to interest our readers.

Design B-340.

A city Colonial house with the dignified and imposing columns and broad terrace extending around on both sides, with porches at sides. The front entrance leads from portico into broad vestibule and brings us into a large reception hall occupying nearly one-third of the ground plan. Note the splendid living room thirty feet in length, with a massive fireplace directly in front of the wide columned opening. From the end of this room is provided a sun room or solarium. There are two other fireplaces provided, one in the library and the other in the dining room.

The width of this house, 45 feet, permits of three commodious chambers across the front on the second floor, with generous allowance for hall space in the center of the house. The main stairway has a double return to a broad landing. A modern sleeping porch is also secured. This home is designed for cement walls over metal lath, but it is such a design as would be most suitable for brick veneer. In stucco finish the architect estimates its cost, exclusive of heating and plumbing, at $9,000.



—F. E. Colby, Architect.

Good Design for An Inexpensive Square House of Nine Rooms

DESIGN B 336

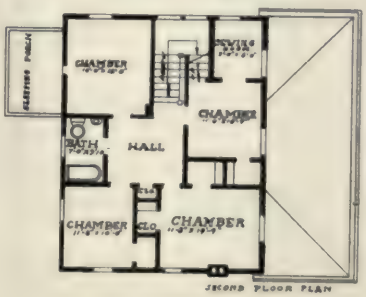
Design B-341.

This is a house which is considerably larger in room accommodation than would seem apparent from the view of the exterior. It is likewise original in its treatment of the gabled dormers, which nicely balance the exterior.

The foundation wall at the front of the house is brought up to the window sill on the projecting bay and is used at

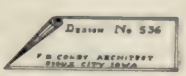


FIRST FLOOR PLAN



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VIEW OF LIVING ROOM—DESIGN B 336.

the same height to inclose the porch. Shingles are used for both stories as well as in the gables. There would be a splendid opportunity here to procure a pleasing relief in the gables by the use of cement and half timber work. There is a central hall 11 feet wide running clear through the house to a depth of 24 feet. To the left is a large living room with fireplace on the south side. A good sized library is closed off from the living room by sliding doors, and there is no reason why the library as located should not be very quiet and secluded. The interior treatment is on the Mission order, Washington fir being used for the inside finish. This wood is to be stained, varnished and rubbed. Fir flooring used throughout.

Design B-342.

Here we have a cottage home pictured from a photograph as recently completed and a design by a frequent contributor to this publication. The treatment of roof with the bracketed cornice is an unusual feature. It is not strictly a Mansard roof, nor yet is it a gambrel roof, but a sort of betwixt and between. The cottage is sided first story and the balance shingled. Heavy square porch columns with wooden balustrade give a neat finished appearance to the front. The porch rests on brick piers; the foundation of the house proper also being brick above grade.

There is a fourth room on the first floor devoted to a library. On the second floor, owing to the depth of the house, 36 feet, five bed rooms have been obtained in addition to bath. These rooms are all of modest size. Close study of the house before us and the detail of the exterior, will show that the architect has presented something very creditable in an inexpensive design.

Design B-343.

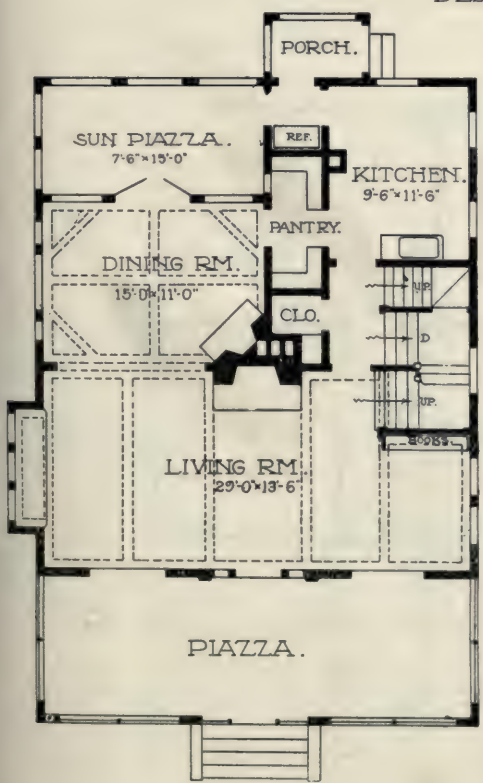
A very artistic design of residence planned by Architect G. M. Kauffman to be built in Clifton Park, Ohio. The outside is strictly for a plastered treat-

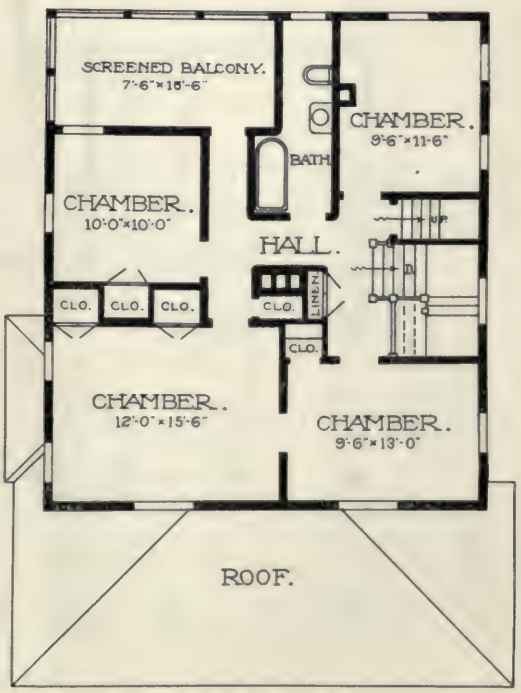


—Chas. S. Sedgwick, Architect.

Sketch for Residence with Cement Exterior

DESIGN B 337



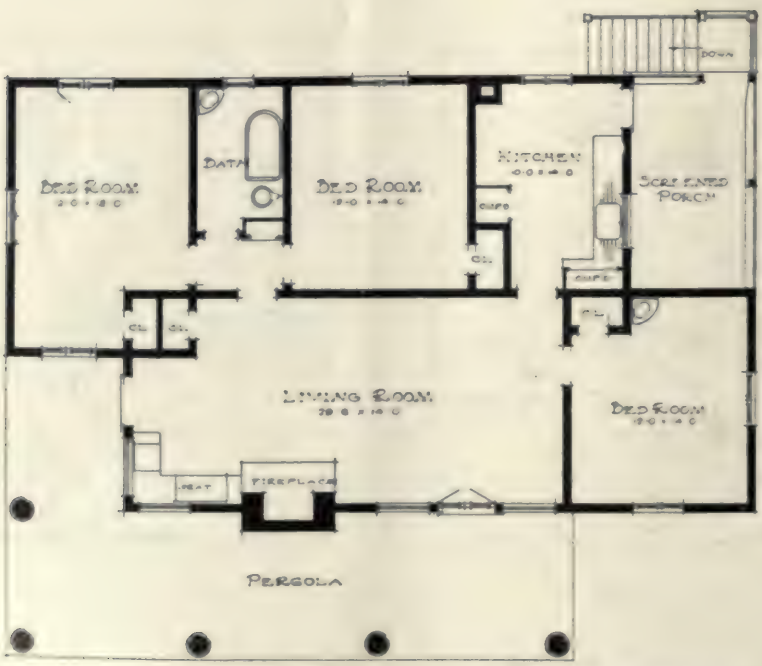




—Keith & Whitehouse, Architects.

Bungalow House in the Western Forests

DESIGN B 338



FIRST FLOOR PLAN

Keith & Whitehouse
Architects



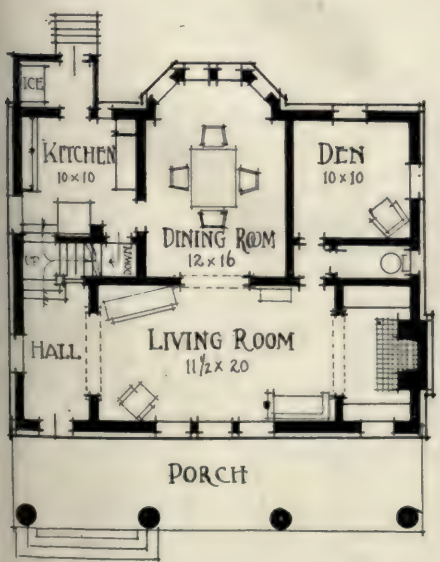
—John Henry Newson, Architect.

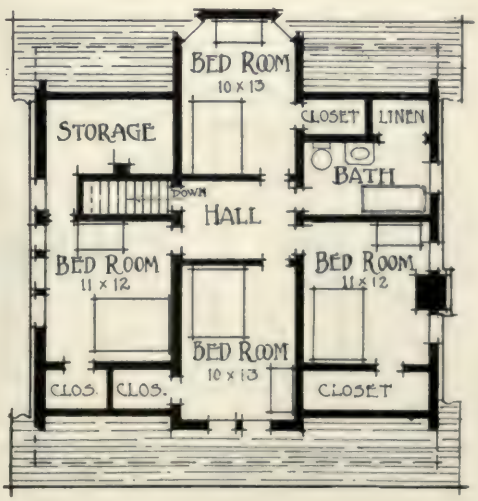
A New England Cottage

DESIGN B 339

ment. The gray stucco sides and red tile roof, together with the brown window trim and ivory sash, secure a very charming effect. The treatment of windows is unusually interesting, and the little balcony over the front terrace adds to the utility and, shall we say—romance of this design.

The interior is effectively arranged; another example of the main living room across the entire front of the house.. The ever popular sun porch is provided opening from the dining room. The dining room has a panel wainscoting 6 feet high and casement windows; likewise, casement windows in the sun porch. The interior trim of living room is mahogany with ivory white ceiling; dining room finished in oak; on the second floor are four bed rooms, alcove, also toilet and bath for servants. There is a screened porch which can be used as a sleeping



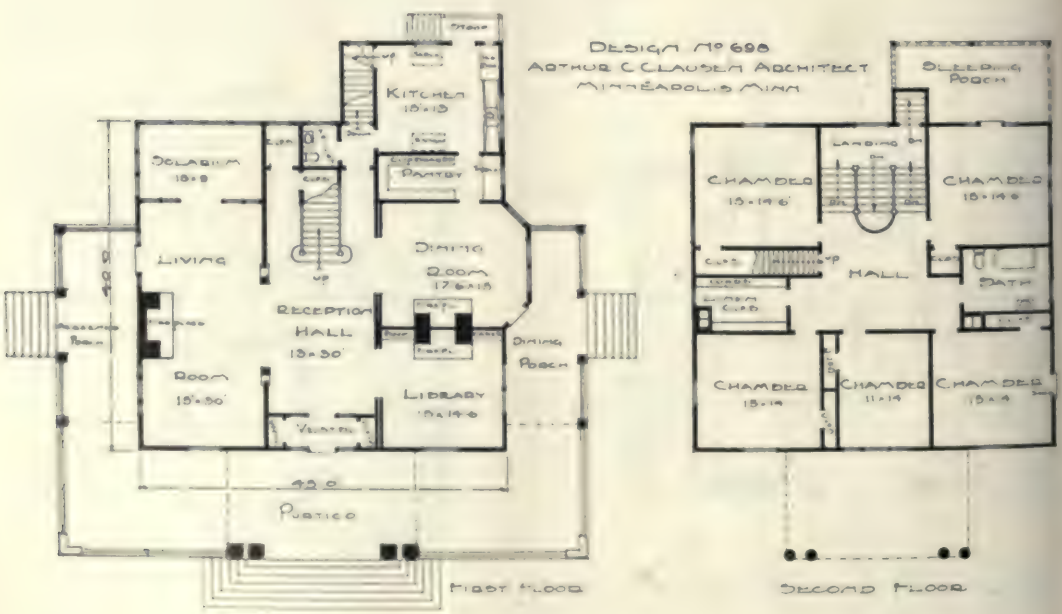




—A. C. Clausen, Architect.

Colonial Design for City or Suburban Home

DESIGN B 340

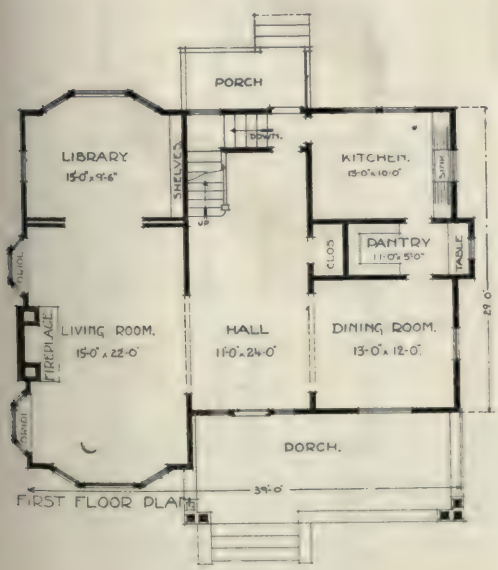


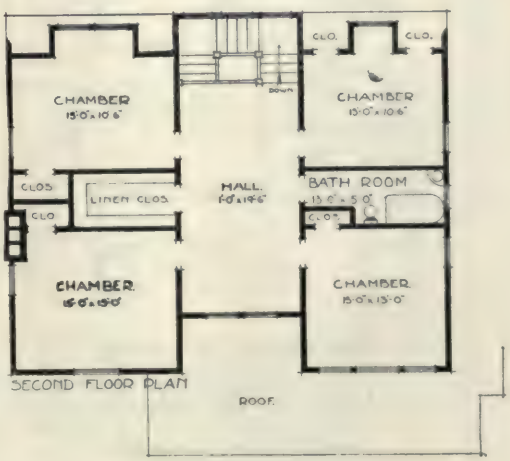


Double Gables Well Balanced

DESIGN B 341

porch. The bathroom has a tile floor and tile wainscoting. The flooring for the living room and dining room is oak, that of the second floor yellow pine; the standing finish is white pine enameled. The architect has placed a maximum estimated cost complete at $7,500, the house containing the cubical contents of 30,000 feet, which at a minimum basis of $2 a foot would make the cost run $6,000.



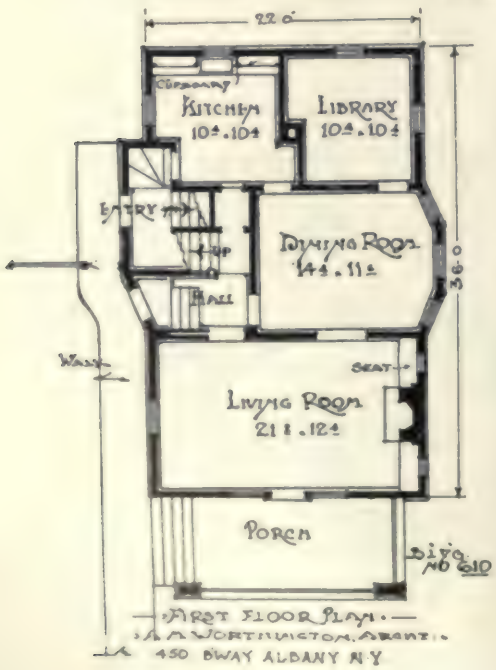


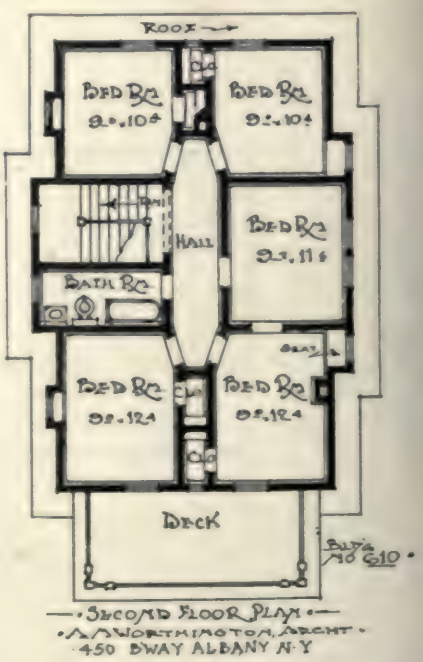


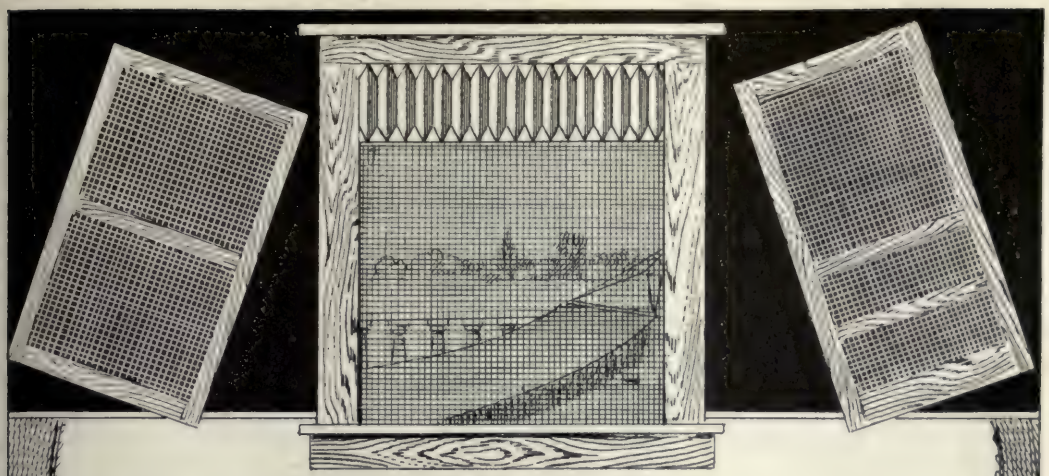
—A. M. Worthington, Architect.

A House of Many Rooms for a Narrow Lot

DESIGN B 342







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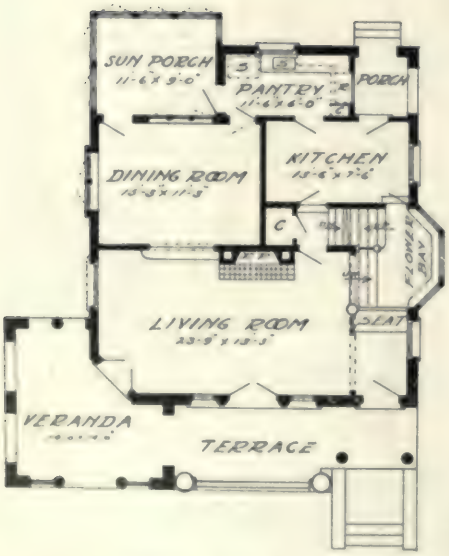
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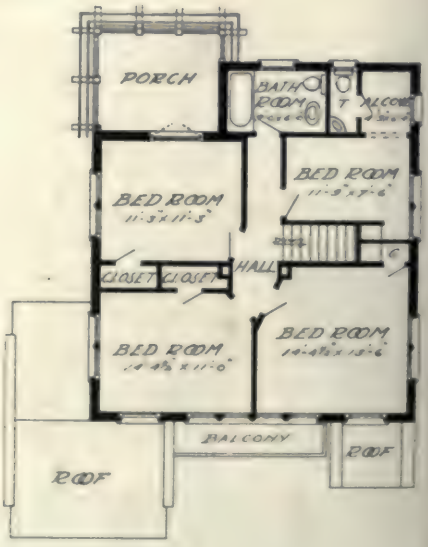
—Geo. M. Kauffman, Architect.

An Artistic Study in Cement

DESIGN B 343



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An Oak Leaf Motive.

ONCE in a while, in the great mass of mediocre and uninteresting wall papers and textiles, one runs across something which is eminently suggestive and sends the imagination afield in search of possible and charming combinations. This happened to the writer a few days ago, when she saw in a shop window a length of wall paper whose design was a confusion of oak branches, their leaves turned to the peculiar grayish brown which belongs to that tree in autumn, with here and there a suggestion of a brighter tone touched with yellow. Straightway she had a vision of delightful settings for that particular paper, and though she may have no opportunity of realizing the vision, she passes it on to some more fortunate person.

She could think of two uses for this paper, which, charming as it was, was a bit sombre, and would need a sunny light. One was on the walls of a living room, above a high wainscoting, the color of fumed oak, which might be the ordinary panelled affair, or the very effective Indian splint finish. Naturally the furniture would be of the same fumed oak, but the rug might be an Oriental one in predominant tones of soft dark rose. A single large chair covered with Liberty velvet in rose tones, and some loose cushions here and there, also in rose, but of plain velvet or velveteen, banded with antique gold braid, would accentuate the charming contrast of rose and grayish brown, and curtains of rose Sun-Fast might be used, with Arabian net next the pane. A wall with so much pattern is only suitable for certain sorts of pictures, preferably those in brown tones, without mats and heavily framed. For that reason, such a treatment would be admirably suited to a room in which the walls were much broken by doors and windows, and plaster casts, effective bits of pottery or metal and sconces might well take the place of pictures, except above the fireplace.

The other scheme suggested was for a bedroom, furnished in Circassian walnut, which must be very popular, judging from the quantity one sees in the shops. This is unlike mahogany in being very unhappy in combination with white woodwork and delicate wall papers. The woodwork should be as nearly the tone of the furniture as possible, and for a bedroom the wall surface should be covered with the paper up to the line of the dropped ceiling, which should be old ivory.

A bedroom to be used only in the summer, in a country house, might well have no color contrast at all, depend for its life upon the brightness of the personal belongings of its occupants, and be extremely restful in its suggestion of shadowy woodlands, afforded by the cool browns and grays of furniture and wall paper. But for all the year round use, a discreet use of a low-toned silvery blue would be advisable. Naturally with a wall surface which is practically a picture, although a subdued one, the material used should be in plain color, either a heavy, rough-surfaced, hand-woven linen, or a French toile, and the color would repeat itself in the self-toned rug, and in a very little blue china, on chimney-piece and dressing table.

The Craze for Black.

In a recent number we commented on the foreign fashion, becoming slowly domesticated here, of using black for the ground of wall papers and textiles. As

The Tale of "Old Hickory"

For ages the trees were man's shelter and abode. He *lived* in them. They were a part of his being.

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But—the desire of man to live in Nature did not go. The rough bark of trees, the blue skies, still hold their appeal.

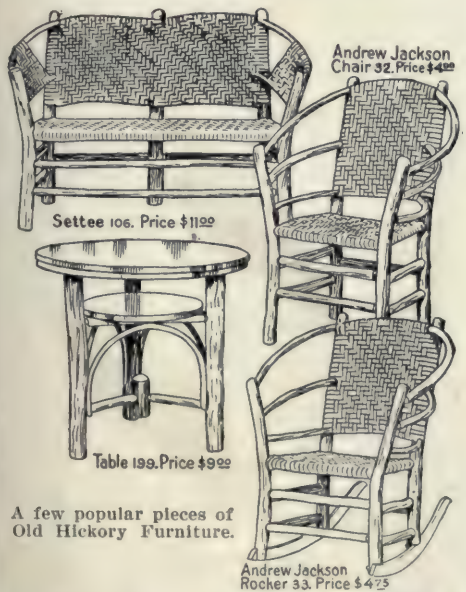
So he went back into the wilderness, and there fashioned for himself a seat from the rough barked trees therein.

It served so well, that he brought this work of his hands, with other pieces of like craftmanship and beauty to match, back to the city.

This is the tale of "Old Hickory." It is our answer to this call of the wild.

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far as the craze has been acclimated here it has been restricted to the combination of black with delicate or brilliant color, but it is interesting to read in a recent novel of a Parisian studio, in which the walls were austerely white, the electric lights shaded by smoked glass, and curtains, coverings and cushions of black brocade, the only touch of color being a huge screen of scarlet lacquer.

Of the black grounded wall papers shown, the most successful are those in which the predominating tone is a rather deep pink. Where the design is worked out in delicate tones, the contrast is too marked to be agreeable. Rugs made from two-toned old rose carpeting and rose mercerized curtains, woven with a black warp, either with a pattern or plain, are successfully associated with these papers. However, the fashion is hardly likely to become a general one, but like all extremes it contains suggestions which may be worked out by the decorator.

Appliqué Curtains.

Hangings, which bought ready-made, cost a pretty penny, can be evolved by clever fingers at a fraction of their price in the shops. The ground is velour or cotton velvet, and the curtain is turned in at the edge under a lining. Two lines of antique gold braid go down the sides and across the bottom, and at regular intervals these are intersected by a spray of flowers cut from printed velvet, and chain stitched on with gold colored silk. A larger group of flowers is at the corner. The work is of the simplest, and the hangings very effective. The idea might be carried out in plain colored cotton taffeta, with an appliqué of cretonne flowers for a summer room, or a bedroom.

Uses for Antique Gold Braid.

The antique gold braid, once so unusual, now to be found in every upholstery department, has a great deal of decorative value, although one sees much of it used in places where it is quite out of place. Braids and fringes should have at least a suggestion of being made from the thread of the fabric which they adorn. Manifestly on this principle gold braid and cretonne do not harmonize. But as a trimming for tapestry, velour or velvet the gold braid is most desirable.

A line of it at the edge of a velour portière, covering the turned up edge is a capital finish, or it may separate a border of a different tone from the body of the curtain. It is much used for bands on velvet pillow covers and to edge table squares of tapestry, while a whole department of small articles of tapestry or brocade, desk sets, book slides, boxes and the like, would be put to it to present a good appearance without their bindings of tarnished gold.

The texture of the braid makes it rather difficult to sew and it is easier to apply it to the edges of boxes, trays and the like with thin glue, but when it is used on curtains or pillows, it can be stitched by machine with a long stitch and fine silk quite invisibly.

As with so many other things of the kind, it pays to buy the imported braid, although it costs nearly double, as it will keep its dull lustre for a long time, while the domestic article tarnishes very quickly, although not disagreeably. The domestic braids run from eight to twenty-five cents in price, the imported ones begin at fifteen.

The Man's Chiffonier.

A sensible array for the top of a man's chiffonier is a mat, not cover, of heavy Cluny or Russian lace, a triplicate mirror framed to match the wood of the chiffonier and a circular tray covered with tapestry and bound with gold braid, divided into four compartments, with a small pincushion in the center, where the dividing strips intersect. A good triplicate mirror is always and everywhere a joy to its possessor, and unlike some other belongings can be carried about, wherever one goes. A back of the tapestry or cretonne used for the furnishings of the room adds much to its appearance, and is easily attached.

Iridescent Effects.

Something rather new are plushes and grass cloth, in a neutral tone, with a sort of iridescent shimmer here and there made by the introduction of colored threads. The designer perhaps had in mind the iridescence of a pigeon's breast. There is a grayish brown wall paper, with tiny bunches of blurred flowers, in

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low tones of color, which has a similar effect.

The grass cloth and the plush were seen in a room in which there was a great deal of old rose, in Oriental rugs and in the tapestry covering of other furniture.

Shades for Single Electric Bulbs.

A pretty way of shading small electric bulbs, placed close to the wall, is with a concave oval frame of wire, covered first with net, then with thin silk. An oval lace medallion is set on the outside of the shade, which is attached by a wire to the back of the bulb. The silk is salmon red, rose pink or yellow, the lace may be either gold, silver, or cream.

Liberty Tapestries.

The Liberty velvets have long been familiar, and are quite the most effective possible covering for a large chair, fabric and design being alike exquisite, and their generous width giving them a great advantage over most piled fabrics. One must have a feeling that they are a bit too sumptuous for the ordinary room, that they are more in harmony with the house of architectural pretensions.

But some at last of the designs are repeated in a finely woven tapestry, quite as beautiful, if not so sumptuous, and naturally less expensive. They are worth investigating when the covering of a large couch or chair is on the carpet. There are substantial advantages in using a figured material when a large piece is to be covered, as it shows soil and fading less readily, and breaks up the large spaces of the seat and back. The figured material, too, is most lenient to the efforts of the amateur upholsterer. The old fashioned hair cloth sofa which persists in many households can be made a really attractive addition to the hall or living room if well covered with one of these soft-toned tapestries.

Another material which is less expensive, and strikes a happy means between the patterned fabric and the perfectly plain one is mohair damask, such as was once, and perhaps still is, used for pew cushions. There is one firm in New York which has it manufactured in an extremely good quality, and in designs copied from old textiles. It is not expensive, $2.75 a yard, fifty inches wide, and is almost indestructible, while in artistic quality it is the equal to far more expensive brocades.

"Kivers."

The homespun blue and white coverlets of the South have been very popular for decorative purposes for a number of years, both the antique ones and their modern copies. Indeed their making has become one of our few cottage industries here in America. Now they have achieved the crowning glory of being imitated in a machine made fabric. This is a heavy cotton material, dark blue and white, woven in one of the characteristic old-time patterns, fifty-inches wide, and sells for $2.50 a yard. It is a most effective material, but open to the same criticism as the fabrics from which it is copied, that the blue is very dark, so that the general tone is sombre, but perhaps that is a fault that may be remedied later. As it is, it is an admirable hanging for the old fashioned bed chamber that is the pride of so many houses, and it might easily be relieved by association with bright colored cretonne and china. Such a bright fabric the writer has in mind, a white glazed chintz with a design of blue ribbon stripes and bright pink hollyhocks, which sounds gaudy but is not. Then there are capital combinations of red and blue in the printed linens, also some of the same sort in domestic cretonnes, which are not to be despised.

Marie Antoinette Mirrors.

It is an axiom of decoration that when you are in doubt you should use a mirror, and one can't well have too many. The Marie Antoinette Mirror, with its inset of a colored print at the top seems to have been invented to dispose satisfactorily of those narrow spaces between windows, which are so common in city houses. It must be confessed that unless one pays a high price, the picture at the top is not apt to be very decorative. But any picture dealer will make a frame to order, fitting it to any picture you may fancy, and using a moulding to match the woodwork of the room. You can have a most interesting mirror made with a photograph in brown tones. Or you may use

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one of the German color prints which copy French pastel portraits. These last are specially good and not nearly as well known as they ought to be. In any case your mirror, while quite unique, will cost you much less than if bought ready made.

A Hint to the Amateur Upholsterer.

Much of the newest and most expensive upholstered furniture is destitute of springs, the seat being either solid wood, or tightly stretched webbing, plainly covered. On this foundation are laid accurately fitted loose cushions, made with a side piece after the fashion of a mattress, and heavily stuffed, either with hair or feathers. Sometimes they are finished with a cord, sometimes the edges are welted, or merely seamed. The average sofa will have two cushions, a specially long one three.

Wardrobe Screens.

The wardrobe screen is either three or four-fold, six feet high, and heavily weighted at the bottom so that it will not tip over. Hooks can be fastened to its back and it takes the place of a closet in a small room concealing the washing arrangements as well. Covered in burlap, with an oak frame, three-fold, it costs $15, but a very ordinary carpenter would make it at a fraction of that amount.

Satisfactory Willow Furniture.

Very much of the willow and reed furniture on the market is poorly constructed, eccentric in design and crude in color. It is a poor investment, as it soon gets rickety and shabby. It pays to buy the best quality, as it is practically indestructible, and can be refinished, while the shapes are in good taste and remain desirable in spite of changing fashions. Simplicity of design and generous size are the things to be sought for, and are cheapest in the long run.

If the natural tint of the willow is not objectionable the Canton willow chairs, to be had at the Oriental shops, are an excellent purchase, and have a quality of distinction much to be desired. They are cheap too, as such things go, a good lounging chair with arms costing six dollars, and the smaller hour glass chairs five. There is also a deck chair, which can be used as a couch, which is a most picturesque article of furniture.

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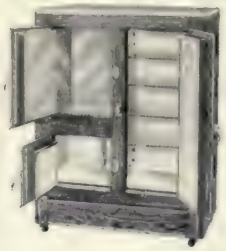
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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

Country Home Remodeled.

C. E. L.—Will you kindly aid me with your good judgment and taste on a few matters in the remodeling of our country home? Now as to decoration and woodwork, will you kindly give me some help on this, too? Would ivory white be pretty in the new front apartment? What should the stairs be? I have a mahogany piano and bookcase and five piece silk velour suite in parlor now; will have to put piano where present mantel is now; would like to dispose of bookcase as there will be so little wall space, but where can we provide place for books; have a great number, etc.

Ans.—Your own suggestions as to changes to be made in your house are thoughtful and well considered. You should really have an architect's drawing for the new kitchen extension with the bath room above. We can see no objection to "breaking into the north wall" and to run a projection of 3 feet beyond the present wall at that point, would improve rather than detract from the appearance of the house. The external appearance will largely depend on how the roof is treated and for this you need an architect's help.

In regard to the interior changes you contemplate; they are all very good and will greatly improve the house. We should certainly enter from the present window, but make a wider door. Have it part glass. The turn on the stairway with landing will be excellent. We are not very fond of colored glass unless planned in a general scheme. We should not advise it in a single small window over landing, the only place you could introduce it, though you might have a small oriel there with diamond panes, or a short, wide, box window thrown out, with shelf beneath. An ivory finish to the woodwork would be excellent, with cap moulding above baseboard stained dark mahogany, also stair treads. The doors could also have dark brownish mahogany finish. This is a pretty treatment for a country parlor. Now, we would send that five piece suite to the auction room. It is utterly inappropriate to a country home. Instead, have pretty natural wicker arm chairs and couch and upholster in cretonne in deep pink roses and green leaves on a cream ground. If you can afford it, do your wall in a gray green grass cloth. If not, get one of the paper imitations. You will be charmed with the result.

The dining room with proposed changes will be a fine room. You will probably use it largely for a family room. Why not put book shelves from chimney to porch door, the height of the mantel? Also set your new triple window high enough in the wall to allow of book shelves beneath it, with a flower shelf above. Yes, the east round bay is good. With this treatment of ends, the room will not be too long. Fumed oak furniture is used, the woodwork can either be all fumed brown stain or the same treatment of doors and cap mouldings in fumed brown with the deep ivory woodwork. A silvery gray wall with window seat, door, draperies and side draperies to windows in rich shade of blue, would be delightful. Inner curtains in both rooms of cream scrim, plain in parlor, barred in dining room.

What to Do with Yellow Oak.

M. T. R.—I find that, in the near future, it will be necessary for me to remove to a small town. The only house available for lease, where we can have the modern improvements of heat, bath, elec-



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Dear Sirs: Kindly send me your decorative plan for room described below:

Room _____
State nature of room.

Walls and Ceiling _____
State whether rough or smooth, plaster, canvas, plaster board or metal.

Woodwork _____
State kind of wood and effect preferred. If previously finished describe present condition.

Floor _____
State kind of wood and finish desired. If previously finished describe present condition.

Furniture _____
State kind of furniture, color and finish.

Do you wish suggestions for rugs, curtains, etc.?

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tricity, etc., is a small cottage, the floor plan of which I enclose.

There are several features which make the decoration of the house rather a problem to me, as I have been accustomed to large rooms and well-planned arrangement. As I am a subscriber to your magazine, I venture to ask your help.

As a large living room seems a necessity, I have ordered the partition between the two front rooms at the south and west of the house removed, which will give one room 27 feet 6 inches by 12 and 13 feet. The furniture to be used in this room is of the better type of craftsman with the soft brown leather trim, while the woodwork throughout this entire house is a very light oak finished with the highest polish possible. I have been accustomed to the soft shades of brown and tan in my living room, but this room will now have both southern and western exposure. Do you think that the fact that the location is in the far north where the winters are long, severe and gloomy would warrant my using the colors I prefer in the wall decorations, draperies, etc., of this room? If not, can you suggest a color scheme which would prove satisfactory, and can you tell me what to use in refinishing the woodwork, should I be able to get the consent of the owner of the house to my doing so.

The furniture for the dining room is a Sheraton mahogany table, chairs and buffet. The woodwork in this room is also a highly polished light oak finish. I have a set of old blue china—an heirloom—which I would like to use for the plate rail in the dining room.

Ans.—The "yellow oak" natural finish of twenty years ago is certainly one of the modern decorator's problems. It is a "bete noir" indeed. Having just been through an experience of this sort, our advice to you is to remove the varnish before attempting to darken the wood. Otherwise you get just a muddy, painted effects in paper would preserve the brown fect. Once the varnish is off, apply Brown Oak Handicraft Stain with Mission-lac finish. If you do not wish to go to the expense and trouble, then the only thing to do is to keep walls and furniture in tones of brown, ecru and cream.

For the dining room the irridescent effects in paper would preserve the brown tones, while giving life and relieving monotony. A pale ecru plain could be used above tops of doors and windows, where plate shelf should come and against this background the blue china would be delightful. With your Sheraton mahogany, however, the yellow oak seems a sacrilege. Paint it deep cream. The woodwork in chamber ought to be painted ivory also, but if the owner will not consent to this then the best we can think of is to make the walls here also pale ecru or very deep cream, a chambray paper and to furnish windows, bed, bureau, scarfs, etc., with cretonne in pastel rose and blue blended on cream ground. Circassion walnut furniture would be the best choice. Don't have a brass bed.

* * *

M. C. M.—"I am a reader of Keith's Magazine and would be pleased to receive your suggestions for color scheme in living and dining rooms, as per sketch herewith.

I will purchase fumed oak furniture for both rooms. Am having oak floors and beamed ceilings and the finish will be of fumed oak. All furnishings will be new with the exception of the rug for the dining room, which is of a conventional design with colors of red and tan predominating.

How dark should the oak floors be?

Ans.—It is unfortunate that the red and tan rug should be used for the dining room. With its abundant south and east light this bright and sunny room would be delightful in a color scheme of greens and blues, or the green and purplish tones illustrated in the Wall Paper article of this issue. They would also be most harmonious with the fumed oak finish and furniture. On the other hand, the living room though lighted on three sides, is quite shaded by the porch on the north, and a color scheme of soft tans, with rug and furnishings in warm but not bright Venetian red, would be most agreeable, and equally harmonious with the fumed oak. Would it not be best to use the rug now on hand here in the west end of the room and supplement it by a long and narrow oriental



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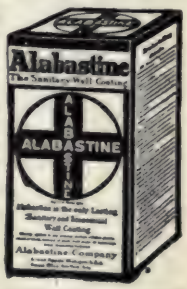
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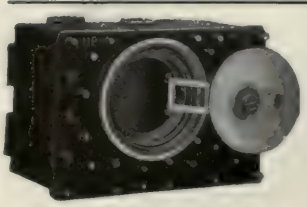
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carrying the same coloring in the east end? Then cushion the window seat with plain soft old red and use over draperies of the same at the large windows with nothing but thin silk in the old red at the high windows each side the fireplace. The wall background should be a grayish tan, either in the tone and tone designs or one of the grancloth effects. As the room is large, either way would be admirable. The depth of stain on the oak floors is a mere matter of choice. They may have a very slight stain introduced into the filler or they may be the same as the standing wood finish. There is a mercerized silk rep which is only $1.25 a yard, which comes in several colorings and is heavy enough to hang in soft heavy folds, if you do not wish to afford velour.

T. M. S.—I have read from time to time your excellent advice on interior decoration and would ask you for your suggestions in a few matters that are troubling us.

First — We want a columned opening between reception hall and living room—nothing elaborate—something plain, neat and dignified.

We planned to have all the woodwork white enameled, with stair and floor finishing mahogany—what finish would you suggest for floors? We want mahogany furniture all through the house.

I plan to have the living room in very dark red—and main color through the halls and entire house dark green. We think of having the walls tinted to carry out color scheme.

What colors would look well in dining room—would pink and dark green be advisable and attractive? The front of house faces east and the living and dining room face north. We have made a nine-foot casement window in dining room.

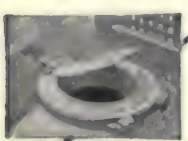
Out side of house grey (light) stucco and white wood finishings.

Home beautifully situated on a big green lawn (an acre), with old willows and springs near house.

Ans.—The columned opening would be feasible if you desire it, but we should advise either sliding glass doors or a simple arch, that could be shut off by portieres. With a columned opening you cannot use draperies and it is always advisable to be able to shut off the dining room when desired. You could have a large screen stand in front of the columned opening if you very much prefer it.

A white enamel finish thru the house will be very attractive for your location, but the floors need not be mahogany. The stair treads and rail could have a mahogany finish, but the oak floors will be correct and far easier to take care of.

We should deprecate a red wall for the living room, both because red is a trying color to live with and because a dark red and green treatment such as you mention, would make a very gloomy interior. Such strong primary colors were formerly used upon walls a good many years ago, but are not at all used now. Red is a very unhappy background for mahogany furniture and should only be used with oak. Another objection is the north facing of these rooms; green, especially dark green, should never be used in a north room. It is very difficult to secure an artistic interior with tinted walls only, unless the house is in a large city where skilled work of this sort can be had. We should strongly advise a hard plaster finish and paper on your first floor rooms, at least the dining room, if nothing more and in this room a very charming wall treatment with the white woodwork and mahogany furniture, would be a 2½ ft. dado of leaf green burlaps above the baseboard, then a white moulding and above that a paper showing birds of paradise in among green foliage on a cream ground. Ceiling tinted plain cream.



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Keep them out of sight underground or below floor in

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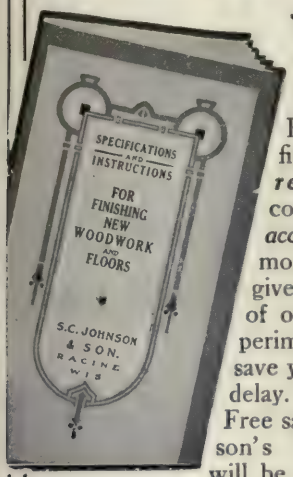
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Will Help You

Because its specifications are *correct.* Its list of covering capacities *accurate,* its testimonials *true.* It gives you the benefit of our expensive experiments, and will save you mistakes and delay.

Free samples of Johnson's Wood Finishes will be sent on request that you may form your opinion by actual working test. We want to *prove* the Johnson merit. You may also have on request, panels of any woods finished with our Dye. Judge for yourself the beauty of the results obtained.

Johnson's Wood Dye

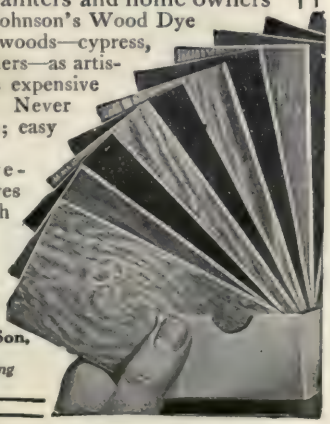
is made in fifteen artistic shades, as follows:

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No. 123 Dark Oak
No. 125 Mission Oak
No. 140 Early English
No. 110 Bog Oak
No. 128 Light Mahogany
No. 129 Dark Mahogany
No. 130 Weathered Oak
No. 131 Brown Weathered Oak
No. 132 Green Weathered Oak
No. 121 Moss Green
No. 122 Forest Green
No. 172 Flemish Oak
No. 178 Brown Flemish Oak
No. 120 Fumed Oak

Endorsed by architects, builders and contractors, painters and home owners everywhere. Johnson's Wood Dye makes the soft woods—cypress, red gum and others—as artistic and rich as expensive hard woods. Never raises the grain; easy to apply. Johnson's Prepared Wax gives that lasting polish which your clients are all asking about.

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When buying glassware—make sure that each piece has a H on it. Every piece of glassware so marked is guaranteed, when used under like conditions, to last twice as long as ordinary glassware.

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Don't Be a Drudge.

A DRUDGE, according to the dictionary, is "one who labors with toil and fatigue." Does not this attitude to labor characterize very much of our domestic routine? It is toil because we think it so, and fatigues us because it is toil.

Too many people have a fashion of looking at all sorts of work, and especially at household work, as something necessarily disagreeable. They need to learn the pleasure in work which is felt by the artist who counts the weariness of his muscles as nothing in comparison with the joy of fulfilling his purpose or realizing his ideal. And surely all of us housewives should have an ideal before us, as well as the artist. The same sort of faculty, in lesser degree, goes to good housekeeping that goes to all the great works of the world. The architect aims at the union of beauty and efficiency, and surely the best sort of housekeeping is at once beautiful and efficient, embracing as it does the perfection of outward appearance and the nice adaptation of means to ends.

Letting Your Mind Rest Your Body.

It is part of the technique of rest that a change of mental attitude is as beneficial as a change of muscular position. One may be condemned to a monotonous task, although it is one of the strong points of housework as an occupation that it is so varied in its demands, and brings so many faculties into play, but the mental attitude need not be monotonous, and the mechanical fatigue of oft-repeated movements may be relieved by a constantly changing mental process. The kitchen may be small, its outlook gloomy and confined, but the far horizons of the world beckon to the eager mind, and may be scanned, while only enough attention is given to the task in hand to insure its accurate performance. It is this sort of mental attitude that saves work from being drudgery, and makes it, if not a pleasure, at least a matter of indifference. True the habit is not acquired all at once, but it is within the grasp of anyone with ordinary powers of concentration.

Paper Bag Cookery.

The paper bag cookery, which seems to be the last thing in culinary science, is only another application of the principle of conservation, which lies at the root of all cooking in closed covered vessels. Naturally if you confine all the steam arising from the heated juices of a chop or a piece of steak in a very small enclosure, instead of allowing them to be dissipated over a whole oven, or diffused through the kitchen, the flavor will be accentuated and the fluid permeate the meat instead of being dried up by exposure to the air. It is the difference between baking beans in a covered pipkin or in an open pan.

The paper bag, when it is possible to use it, which is only in the case of comparatively solid articles of food, has the advantage of obviating the washing of pots and pans. While the specially prepared bags are desirable, they are not absolutely necessary. The waxed paper bags used in cartons of uncooked cereals are available, and enthusiastic souls have been known to butter the ordinary paper bag of commerce.



Put in Your Own Lighting and Power Plant, Save Money, Time and Labor

Even if you live out of the range of electrical current supply, you can enjoy all of the electrical conveniences of a modern city home and make your day's work lighter and more profitable.

The Dean Electric Company's Home-Lighting & Power System

will not only light every room in your home and your out-buildings, but it will operate your feed chopper, washing machine, food chopper, sewing machine, grind-stone, cream separator, vacuum cleaner, ventilating fans, clothes mangle, or in fact anything that uses electricity for power.

Notice to Architects

WHEN you prepare specifications for homes, stores, or churches outside city electrical zones, include the Dean Home-Lighting and Power System. It requires no additional floor space and is much cheaper than other systems. Enables you to make more complete and satisfactory plans. Write for free catalog explaining this system.

Practical, Economical, Easy to Install

You can set up the Dean plant yourself in any corner of the basement. It comes in two complete units—the engine, dynamo and power-board mounted on one base, and storage batteries on the other base. It requires no attention except to supply gasoline and lubricating oil. The Chloride Accumulator batteries will furnish power and light for twenty-four continuous hours without operating the engine.

Write for Free Descriptive Catalog

This fully explains the Dean Electric Company's Lighting and Power System. Don't wait until tomorrow, but write today.

The DEAN ELECTRIC CO., 1012 Olive St., Elyria, Ohio

Manufacturers of Electric Apparatus, Power and Switch Boards

"Look for Dean where Quality's seen"

Another point to be noted is that great care is needed lest the food shall be oversalted, or peppered, as absolutely none of the flavor is wasted. Not more than half the usual quantity of flavoring is required. It is obvious that only comparatively dry articles can be cooked in this way, and it is difficult to see, except as saving dishwashing, what is the precise advantage over cooking in a casserole, the principle applied being exactly the same. In fact, long before casseroles or fireless cookers were heard of, let alone paper bags, foreign cooks used to dispose meat and vegetables in a deep dish, which they made air-tight by covering it with pie-crust, made without any shortening, and removed in a very charred state after several hours' cooking in the oven. This process is elaborately described in old English recipes for jugged hare, which was esteemed a great dainty.

"Pots and Pans."

Isn't there, after all, a quite unnecessary fuss made over the cleansing of kitchen utensils? A frying pan is no more difficult to wash than a platter, unless it has been allowed to stand until the grease is congealed, and fragments of food have dried onto it. The easy way is to wash a cooking utensil the moment the food has been removed from it, or if this is not practicable, at least to fill it with hot water with a teaspoonful of some alkali, ammonia, soda, or washing powder. And there is no more efficient instrument of cleansing than a wire sink brush, kept for the purpose.

But, as you value your time, never reheat anything like spaghetti, cereal or pudding in the dish in which it was originally cooked. Infallibly the particles of food adhering to the sides of the dish will burn on and the dish will have to be scoured before it can be used again.

The Pros and Cons of Spring Cleaning.

The general use of rugs has reduced the woes of house cleaning to a minimum, but even so a general cleansing of the house once a year is necessary, though it may not involve the taking up, cleaning and relaying of carpets. The general concensus of opinion with experienced housewives is that autumn is the better time for this general cleaning than spring, as a house does get extremely dirty in the months of open windows and summer breezes. Moreover the weather at that time of the year is apt to be more propitious than the languid days of spring, when one is worn out with the winter's work or gaiety. But the thorough purification of the autumn is made much easier if the year's accumulations have been disposed of in one way or another in the spring, and closets and attics are in good order.

If one has never done it before, it is worth while considering putting away the rugs entirely for the warm months. It simplifies the housekeeping wonderfully, and the saving in wear and tear on the rugs is very great.

Enlarging the Vegetable Horizon.

Most of us have a very limited number of vegetables in our bill of fare, and are very inhospitable to new ones, differing in this respect from Europeans who utilize almost everything that grows. Then too they cook vegetables which we only eat raw. Who in this country ever tries the stewed cucumbers or lettuce which are common there? Do most people know anything about kohl-rabi, except as they see it on a stand in the foreign quarter of their town? Or does the market man whose trade is wholly native ever keep celery root? Yet all these things are extremely good, and many of them cheap, and might well be used by all of us. French chestnuts, too, are available all the year round, and are much cheaper than our own.

Celeriac, or root celery is excellent for a salad, either by itself, or combined with apples and walnut meats. Slices of celeriac, boiled and chilled are used with slices of orange for a garnish to roast duck, and French dressing is passed with them.

We often hear that spinach is an admirable spring medicine. For the best effect it should be young and tender, and be cooked for ten minutes, closely covered, in its own juice. It is then chopped, seasoned with butter and salt, a teaspoonful to half a peck, and simmered another ten minutes. Cooked in this way all the valuable salts are retained.



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OAK FLOORING Used. Largest Apartment Building in the World

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Beautiful -:- Economical -:- Durable

Attracts your attention immediately
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¶ OWNERS and BUILDERS find it a clinching argument to say "It's Floored with OAK FLOORING." It means that the tenant or the buyer will be glad to pay 10 to 15 per cent more. In color, it is **rich** and **cheerful,** and imparts an air of **refinement** and **elegance** to a home. **It is the modern flooring.**

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¶ OAK FLOORING laid forty years ago in public buildings, after very hard service, is still in **good condition.** For **durability,** OAK is the **best.**

¶ There is a **solid satisfaction** and **lasting pleasure** in the **substantial** and **dignified appearance** of OAK FLOORING.

¶ A carpenter or handy man can lay OAK FLOORING successfully. It is very **profitable** work for any carpenter.

¶ Any truthful landlord will advise that OAK FLOORING is a **splendid investment.** Nothing else will **increase** the **renting** and **selling values** like OAK FLOORING.

Write for booklet

The Oak Flooring Bureau

873 Hammond Bldg., Detroit, Mich.

Brenlin

Window Shades



Always look well—really shade—wear so much better

Brenlin has the soft, dull finish now so much in vogue in rugs and hangings, and the quiet tone of the Brenlin colors harmonize perfectly with any color scheme.

Brenlin is supple — not stiff. It always hangs smooth and even. No matter how long a Brenlin Shade is used, it won't become faded and wrinkled nor frayed at the edges.

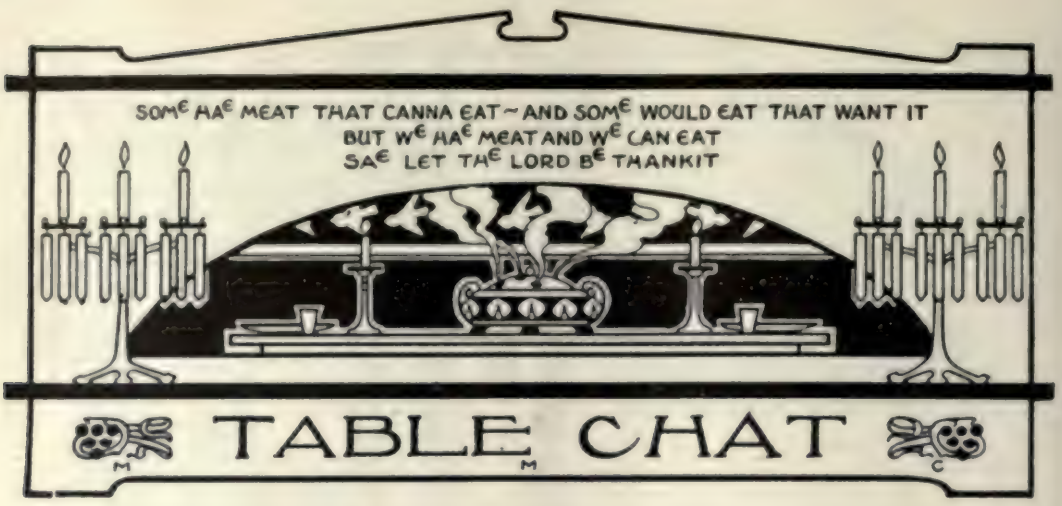
The difference in material is what makes Brenlin look so much better and wear so much longer. Brenlin is a closely woven cloth, made entirely without the "filling" which, in ordinary shades, cracks and falls out, leaving unsightly streaks and pinholes.

Brenlin is *not* expensive. There is scarcely any difference in cost. For a few cents more a shade you can get Brenlin and it will outwear several ordinary shades.

Write today for the Brenlin Booklet

In it are actual samples of Brenlin in all colors, also in Brenlin Duplex—and many helpful suggestions for the artistic treatment of your windows. With it we will give you the name of the Brenlin Dealer in your town.

Look closely for this mark—BRENLIN perforated along the edge of every yard. Be sure that you see it when buying and when your shades are hung. Chas. W. Breneman & Co., 2066-2076 Reading Road, Cincinnati, O.



Egg Cookery

IF you want to serve your family some morning with an egg dish which is as tasty to look at as it is delicious to eat try Oxeyes, for which cut inch-thick slices of whole wheat or white bread, and cut each round with a cooky cutter. Cut the center out of these using the kitchen scissors or a very small cutter. Toast these rings, butter well, then in the center of each drop the yolk of a raw egg, having first put the toast rings on a buttered serving dish. Beat the whites of the eggs to a froth and make a ring on top of the toast, sprinkle with salt, white pepper and a few drops of onion juice, if liked, then set the dish in a very hot oven for four minutes, when the yolks will be cooked and the white slightly tinged with brown. If soft eggs are liked bake for only three minutes. Garnish with fried parsley and serve at once. When meat is permissible, finely-grated cold boiled ham may be sprinkled over the eggs.

For scrambled eggs with toast fingers, cut stale bread first in slices then in oblongs, then each oblong in half cornerwise. Toast these delicately and butter, then arrange in a deep dish as pictured. For the eggs break five eggs in a bowl and beat just sufficiently to mix the yolks and white, then add a tablespoonful of melted butter, four tablespoonsful of rich milk, or two of milk and two of cream, salt and pepper. In the skillet have another tablespoonful of butter melted and before it begins to discolor pour in the eggs. Cook over a slow



OX EYES.



A New Pattern—OLD COLONY

The Old Colony is the highest achievement attained in silver plated ware. The design possesses individuality without sacrifice of simplicity or purity of outline. The pierced handle deserves especial attention. Appropriate for any time and place, it is pre-eminently fitted for Colonial and Old English dining rooms. Like all

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"Silver Plate that Wears"

it is made in the heaviest grade of silver plate, and is backed by the largest makers in the world, with an unqualified guarantee made possible by the actual test of 65 years.

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MERIDEN BRITANNIA COMPANY, Meriden, Conn.
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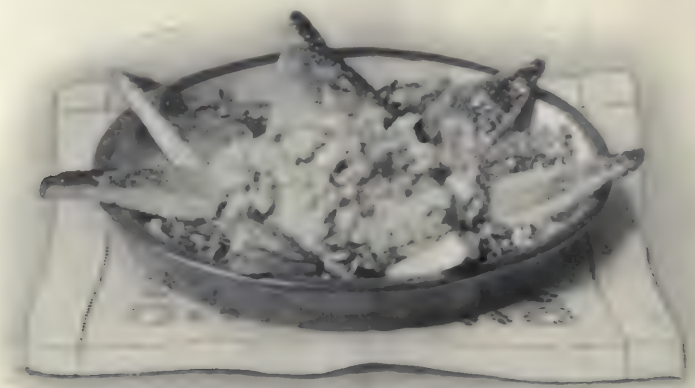
New York Chicago San Francisco Hamilton, Canada

You will be interested in seeing this beautiful advertisement printed in full colors on the back cover of many of the leading publications. It is one of a series that will appear during 1912.

fire, drawing the eggs away from the bottom and sides as fast as they grow firm. When all are creamy—do not let them get too stiff—pour in the center of the dish, and between each toast point put a little bunch of well-washed and drained cress, fried parsley or sweet green peppers cut in very thin rings. When serving help each person to two points of toast, on which pile the egg, and top with the cress.

Egg Scallop is sufficiently hearty to form the main luncheon or supper dish. For four or five portions boil six eggs for twenty minutes, then let them cool in the water in which they were boiled, after which peel and slice them. Melt two tablespoonfuls of butter in the skillet and stir into it a tablespoonful, level, of flour, adding half a cupful of cream and an equal quantity of milk, or all milk may be used, and cook for five minutes, with constant stirring; last of all stir in one teaspoonful of minced parsley or chives, if the latter are liked and are obtainable, and season to taste with salt and pepper. Keep this sauce hot in a double boiler or in a bowl set over hot water while filling a deep earthenware dish or casserole with alternate layers of the sliced eggs and bread crumbs, dotting each layer of the latter with butter. When the dish is full pour in the sauce, and cover all with a layer of the butter dotted crumbs. Bake for twenty minutes in a moderate oven and serve very hot.

Egg Cream on Toast is a pet breakfast dish with our English cousins. For it the toast should cut in oblongs made by dividing each slice in two, after cutting off the crust. Butter these slightly and cover so they will keep warm and soft until required. In the skillet melt two tablespoonfuls of butter, add a level tablespoonful of flour and stir to a cream, then put where the mixture will keep warm, but not cook, and stir in a cupful of rich milk. Stir well until smooth, then gently cook until thick, being careful not to let it scorch. Separate the whites and yolks of three eggs and beat the whites until dry and stiff. Slightly beat the yolks and stir into the cream sauce, then season with salt and pepper. Last of all, fold in the stiff whites, also a teaspoonful of chopped parsley. Put this mixture on the toast slices, after placing these in a buttered baking pan. Heap up the egg, then smooth the top with the blade of a knife, dipping it in milk, and then bake in a quick oven until golden brown. Serve quickly or they will lose their lightness.



SCRAMBLED EGGS WITH TOAST FINGERS.

Eggs stuffed with sardines is a delicious dish for company tea or luncheon. Anchovies may be used instead of the sardines, but the latter are more universally liked. Boil four eggs hard, cut them in halves lengthwise and remove the yolks. Remove the skin and bones from four large sardines and rub them to a paste with two tablespoonfuls of butter,

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which explains the danger of unsanitary, germ infested, zinc lined refrigerators, that poison milk and other foods. Zinc lined refrigerators are positively dangerous because the zinc corrodes and forms zinc oxide, a virulent poison. Damp, poorly insulated refrigerators, with poor air circulation, are equally dangerous. Many families have traced cases of serious illness to their unsanitary refrigerators.

This handsomely illustrated 52 page book gives a vast amount of valuable information about refrigerators that you should know. We will gladly send you a copy free on request. It also tells why the celebrated

McCray Refrigerators

keep all food fresh, untainted and healthful. You ought to know why the McCray Patent System of Refrigeration and Air Circulation gives a dry, clean, thoroughly sanitary refrigerator, free from all odors, germs or poison. The book explains.

McCray Refrigerators are made in all sizes for every purpose, and are guaranteed to give absolute satisfaction. They can be arranged for icing from the rear porch so that the iceman need not enter the house, and can be equipped with special ice water cooler, racks for wine, beer, mineral water, etc., and other special features if desired.

We also send any of the following catalogues free on request:

No. 88 Regular Sizes for Residences.
No. A. H. Built-to-Order for Residences.
No. 49 for Hotels, Clubs and Institutions.
No. 68 for Grocers.
No. 72 for Florists.
No. 59 for Meat Markets.

McCray Refrigerator Co.
408 Lake St. Kendallville, Ind.
Branches in all Principal Cities.



250 INTERIORS BEAUTIFUL
AND THEIR DECORATION

NEW EDITION NOW READY

This book will prove to be one of the most interesting of Keith's Publications, and of great value to the home builder.

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Entrances and Vestibules
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Living Rooms—Dining Rooms
Sleeping Rooms—Outdoor Rooms
Dens and Fireplaces
Rustic Bungalow Interiors

PRICE, ONE DOLLAR

M. L. KEITH, 426 McKnight Bldg., MINNEAPOLIS



One side is an unsightly drying yard—the other an attractive, well-kept lawn—no posts—no poles.

As soon as the washing is out of the way the dryer can be *easily and quickly* removed.

Other dryers are made in one piece, heavy and hard to handle. The

Hill's Clothes Dryer

is in two light parts and a moment's work removes it from the yard with no tax upon the strength.

It is set up with equal ease and all danger of accident to your clothes prevented by the patent device which locks the reel into place.

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HILL DRYER CO.
313 Park Ave., Worcester, Mass.

a half a teaspoonful of minced parsley and a shake of cayenne. The mixture must be perfectly smooth, and it is best to rub it finally through a sieve. Fill the egg whites with the paste and stand each on a round of buttered toast. Sprinkle the tops of the eggs with bread crumbs and dot each with a bit of butter, then set in the oven for a few minutes to heat through. Serve with Italian sauce made as described for the fish, pouring this over the eggs and toast. Serve at once. This is an Italian dish and reflects credit on the chef who invented it.

A Substitute for Butter.

An economical substitute for butter, to be used for vegetables, is made by frying out ham, bacon or poultry fat, either raw or cooked, also the drippings from sausages or the fat skimmed from soup or gravy, allowing to each half pint a small onion, a little thyme, and summer savory, a teaspoonful of salt and a little pepper. Try out at a low temperature, and strain through cheese cloth. Keep in a cold place.

Succotash.

Without succotash the summer menu would be incomplete. To make it in its most appetizing form wash a pint of shelled Lima beans, which boil for twenty minutes, then add to it, without draining off the water, the corn from six medium-sized ears and continue boiling until the corn is tender, when drain, pour on half a cupful of scalding hot milk, two tablespoonfuls of butter, and salt and pepper to taste, and serve at once.

Peach Parfait.

Peach parfait is made by stewing pared and quartered peaches with a very little sugar until soft enough for the pulp to be pressed through a sieve, then simmer a pint of this pulp with half its quantity of sugar until thick, being careful it does not burn, and when almost a paste set aside to cool. Whip three cupfuls of rich cream until dry and stiff and fold into the peach pulp. Freeze in the usual way. Banana, raspberries or pineapple may be prepared in similar fashion.

By Way of Advice.

In closing let me impress it upon the cook to use as little water in cooking summer vegetables as can be done without burning, and endeavor to serve as soon as cooked.

Cook tomatoes, if possible, in earthenware and enameled saucepans. Avoid using tin and iron, as the juice is acid.

Chicory or endive must be washed and dried quickly, as leaving it in the water makes it bitter.

When stewing fruit it takes nearly twice as much sugar to sweeten it if added before cooking. Cook first, then sweeten to taste.

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have your printer use
"Character Bond"
It assures
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but very little more for an absolutely dependable Roofing than you do for one that may or may not give your customer the desired service. WHY TAKE THIS CHANCE?

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is not an experiment. It is an absolutely dependable roofing backed up with a "Sixty Years' Experience" Guarantee, and that's worth a whole lot to you Mr. Dealer. Neither you nor your customers are taking chances when UNDERFELT ROOFING is used.

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"The Home of Quality"
DULUTH :: :: MINNEAPOLIS :: :: FARGO

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The Home of Wholesome Food



A Germless Food Compartment

A Snow-White Solid Porcelain Compartment

It does away with cracks, joints, crevices, corners and other natural hiding places for dirt, odors, decaying food and dangerous microbes found in other refrigerators—the one *really sanitary* food compartment.

The "Monroe"

A Lifetime Refrigerator

Send for Our Free Book on Home Refrigeration

It tells you how to keep your food sweet and wholesome—how to cut down ice bills—what to seek and what to avoid in buying *any* refrigerator. It is packed with money-saving hints, and every housewife and home owner should have one. It tells all about the "MONROE"—describes its wonderful lining and the many other grand features that have given this refrigerator its position as the world's best.



Sold Direct

The "MONROE" is sold direct to you—at factory prices—on 30 days' trial. We pay the freight and guarantee "full satisfaction or money back." *Liberal credit terms if not convenient to pay cash.*

The "MONROE" is the **ONE REFRIGERATOR** with each food compartment made of a solid piece of unbreakable snow-white porcelain ware with every corner rounded as shown in above cut. The **ONE REFRIGERATOR** accepted in the best homes and leading hospitals. The **ONE REFRIGERATOR** that can be sterilized and made germlessly clean by simply wiping out with a damp cloth. The **ONE REFRIGERATOR** that will pay for itself many times over in a saving on ice bills, food waste and repairs. The **ONE REFRIGERATOR** with no single point neglected in its construction, and suitable to grace the most elaborate surroundings.

MONROE REFRIGERATOR COMPANY

(15) **Station 6, Lockland, Ohio**



No. 875½.

"REPUTATION AND QUALITY COUNT"

$28.60

For this elegant, massive selected oak or birch, mahogany finished mantel, beveled mirror 18x36,

"From Factory to You"

Price includes our "Queen" Coal Grate with best quality enameled tile for facing and hearth. Gas Grate $2.50 extra. Mantel is 82 inches high, 5 feet wide. Furnished with round or square columns as shown in cut.

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Central Mantels

are distinctive in workmanship, style and finish and are made in all styles—Colonial to Mission. **Catalogue Free**—Will send our new 100-page catalogue free, to carpenters, builders and those building a home.

CENTRAL MANTEL CO.

1227 Olive Street **ST. LOUIS, MO.**



Comfort and Privacy

The Burlington Venetian Blind

will shade your porch and enable you to make your porch a haven of rest and comfort on sizzling hot days.

With the Burlington Venetian Blind you will get the advantages of open air, and at the same time you will be secluded from the gaze of passers-by. It is easy to adjust the Burlington Venetian Blind to any angle. The top can be opened for light and ventilation and the lower part closed to keep out the sun.

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Keeping a Cement Building Uniform In Color.

CEMENT frequently has several shades of color after it is dried. To make a building uniform in color wash the entire surface with cement made by mixing two parts of Portland cement and one part of marble dust with sufficient water to reduce it to the consistency of whitewash, and apply with a whitewash-brush. Wet the wall before applying the wash and keep it constantly wet during the work. This is decidedly important, as the wash will not adhere to a dry wall.

Some of the Uses of Sand.

There was a time when man was admonished not to build his house on the sands. Now he disobeys that injunction by going it one better. Today he builds his home of sand itself. In Biblical times people were not acquainted with the sandstone sand-lime brick. As a building material this had its origin in Germany some forty or fifty years ago. It is but recently, however, in this country at least, that the value of the discovery has been to any extent appreciated. There are two or three well-known systems of manufacturing it, each of which has its warm supporters. Under one system, which has met with considerable favor in the United States, coarse and fine sand, separately put through a drier and then a measuring machine, are mixed together. Lime is then added, six parts of the latter to ninety-four parts of sand. Water is poured in, as required. If raw lime is used, the composition of sand, lime and water is stored in a hopper for the complete hydrating, or slaking, of the lime. This process usually takes from twelve hours to one day's time. The mixture is then ready for the presses. These are ponderous affairs, of enormous power, capable of exerting a tremendous pressure. In the space of a second and a half the particles of sand are rammed and crushed into a solid mass. The freshly pressed bricks are then piled on a little car, about 1,000 to the load, and shoved into a baking cylinder, which is then bolted up. Steam and chemicals do the rest of the work. The steam in entering this cylinder first passes through the chemical, which is deposited upon the brick.

The bricks are simultaneously baked and dried in the oven, and when the head of the cylinder is removed, are ready for market. Mineral oxide is the chemical driven in with the steam, various shades of pink and yellow being thus produced.

Glass—the basis of which is sand—is being extensively used today as a fireproofing material and in the form of bricks it has been tried out for construction purposes. That was an ideal that appealed instantly to the imagination—a home constructed almost entirely of ground glass, through which, even in cloudy weather, a soft restful light would be diffused. To the housewife it would mean hard walls upon which she might dash water to her heart's content. In short, the idea presented was one of cleanliness and comfort, combined with novelty and artistic effect.

It was several years ago when glass brick was produced by casting in a mould. Its really satisfactory qualities were offset in large measure first of all, by its high cost. For that reason, architects were reluctant to adopt it for general use. Moreover, it was found to be peculiarly susceptible to breakage in the course of transportation. Lastly, it had an unfortunate tendency to chip. There was one decided advantage the glass brick had over all other forms of building material: being hollow and, therefore, a most indifferent conductor it protected the in-



Administration Building and Power House at Sault Ste. Marie Locks, Michigan. Asbestos "Century" Shingles specified by the U. S. Engineer Corps—applied by the Saginaw Sheet Metal Works. Illustration reproduced from an artist's sketch.

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terior of office or home against extremes of heat or cold.

This most decided merit, however, could not offset such deficiencies as just described. Cast glass tile, on the other hand, has been used to a considerable extent, and on the whole with satisfactory results. When the surface is once scratched, however, it quite easily fractures. It is necessary to make the glass tile very thick to prevent this.

But concrete is the real foundation of the building industries. Its plastic characteristics, together with its remarkable strength, rigidity and imperviousness to frost and moisture and heat, when properly set, easily entitles it to this positoin.

But the mere addition of sand is not, in itself, of value to the user of concrete. Indeed it may weaken the structure. This is especially true if worn, rounded grains of like size are employed. Smoothness of surface and regularity of size militate against adhesion. By employing sands from various screenings, the mass dovetails together with the least possible number of voids. The kind and quality of sand to be selected is one of the big problems of the concrete constructor. In the rougher sorts of work where strength is not so much a factor no special knowledge or very special care need be exercised. Ordinary pit sand will be found to be quite satisfactory.

Indeed, it sometimes gives to the composition a greater strength, which seemingly increases with age, as the compound becomes fixed. This is due to the porous nature of the softer sands. Not only does the mortar bind the grains closely together, but its finds entrance into the pores. Thus the individual grains unite with the cement, forming when dry a remarkably compact, and well-nigh indestructible whole. Where, however, it is desirable or necessary to exclude moisture, the harder siliceous sands serve to much better advantage.—Tech. World.



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Soap-water instead of ordinary water has successfully been used for the purpose of making reinforced concrete watertight. The case is reported in Beton und Eisen, says Contract Record, and concerns a grain elevator built on the Danube, exposed to inundation. The concrete was provided with two coatings, also of concrete. The outer coating, 3½ inches in thickness, consists of fine-grained concrete containing 400 kg. of cement and 120 litres of water per cubic metre of mass, and the inner layer, ½ inch in thickness, consists of cement mortar prepared with fine river sand. The water is replaced by a solution of common soft soap (potash soap), about 4 kg. of soap being added to 1 cubic inch of concrete. The building has stood one inundation well, while another building of the same material, without the soap, did not quite keep the water out. Subsequent tests were also favorable. The soap concrete is very cheap compared with other means used to render the concrete impermeable to water. The action of the soap seems to be that the lime of the cement is bound by the fatty acids of the soap.

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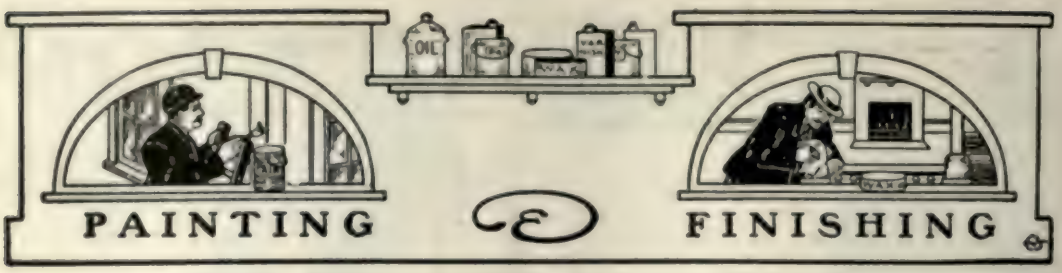
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Builders' Hardware.

DID you ever size up a residence by the looks of the front door knob and lock? Of course you have, and so too have many others. Quite the most prominent thing about an entrance door is its hardware—the bell or knocker announcing your arrival, the lock giving safe security to those within and a knob to which the hand instinctively goes out.

It seems needless then to say that the front door hardware is important. It is not only the most prominent thing about the entrance door, it may also be the most decorative, and by its appearance we have come—sometimes without knowing it—to "size up" the quality of the entire house.

And if this is true of the front door hardware, how much more true it is of the hardware trim on the inside of the house. The one feature that more than any other indicates the quality of a residence is the builders' hardware that is used—a very small item of expense itself, amounting to less than two per cent of the total cost of a dwelling even when the finest grade of hardware is used, the hardware trimmings are in such prominence that they dominate the entire structure. Cheap builders' hardware goes with a cheap house; high grade builders' hardware gives the entire interior the look of quality. For these reasons it is an exceedingly good investment to use high-grade hardware trimmings on all work.

Urge and advise the owner to make a large enough appropriation for this item so that real satisfaction can be had. The locks are the defense of the home, and the proper selection of the ornamental trim is an important factor in the decorative treatment. The builders' hardware is in such prominence that it sets the style for the entire building.

It is interesting to note some of the present day developments in builders' hardware. There are styles here the same as in millinery or dress goods—though they come on more gradually and last longer. The tendency today in builders' hardware is decidedly toward simplicity of outline and the return of Colonial standards. This is shown in the decreased demand for ornate designs. The substitution of handles with thumb-latches, instead of knobs, and the increased use of glass knobs on inside doors are both decidely Colonial features. There is also a growing demand for the simple finishes, as the old brass, dull brass and bronze.

The popularity of casement windows has brought special casement hardware into prominence; and, at the same time, the ingenuity shown by the hardware people in designing sash adjusters, casement locks and bolts, etc., has augmented the popularity of this style of window.

The building public in general is coming to realize this. There is today a perceptible turning back again to the spirit of the old-time craftsmen who hammered and wrought their very heart's blood into their work giving the best that was in them and producing honest works of real beauty, which were to be used in every day life; so today we are getting back to this old conception that things of beauty are to be used; or to put it the other way, that what we see and use in our every-day life should be strong and beautiful.

And to nothing does this apply with quite so much force, as to builders' hardware.—Extracts from articles in the American Carpenter and Builder.

Treatment of a Stained Ceiling.

Just why a stain acts as it does on a water color that is applied over it, I never could tell, and it does no particular good that I can see to ascertain the cause of





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the stain. Most of all stains are caused by the action of water, no matter how it got there. If it is not treated in some efficient way it will come through the water color. In the first place, the wall must be perfectly dry. Whatever will keep back the stain, just as a pine knot or sap is killed by shellac varnish, will answer, no matter what it is. There are several liquids that will do this. Shellac will do it, but it is too expensive for a large surface. A varnish, and a cheap one at that, will do it. Oil and turpentine paint will answer. If the ceiling is badly stained, it will be well to coat it all over with a thin cheap varnish. Nothing makes as good a foundation for water color work, and by this I mean all kalsomines, as a painted surface, or a varnished one. It is not well to have a very porous surface to water color over. I have been asked, many a time, will water color cover over paint? Sure, it is the very thing.—Building Age.



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One of the newest of electric cooking devices is a combination toaster which can be placed on the dining room table. This toaster looks like a small table, and is provided with a removable wire top on which to rest the bread while toasting. Underneath this wire top is a solid metal plate, and by removing the wire toaster the plate becomes a stove, on which water can be boiled, a flatiron heated or griddle cakes baked. If one desires to fry, it is only necessary to turn upside down the metal top, which is provided with a rim on the under side. It then becomes a frying-pan. The handle of the stove can be used as a pancake turner. In fact, this small ingenious contrivance, about the size of a tray, which can be placed by the side of the mistress of the house when she is at a meal, is arranged so that water can be boiled, eggs scrambled, eatables fried, griddle cakes made any many other things prepared, simply by removing or turning various parts.

A unique and practical electric device is a heating pad that takes the place of a hot-water bottle. The coil at the end of this is attached to the nearest socket and the temperature is regulated at will. The pad is made of fine wires woven into asbestos, insulated and covered with felt. Some of these warmers have washable muslin slips and others are covered with rubber cloth. They are safe, and never leak as water bags are liable to do. The acme of utility in electric devices is obtained in a patent which makes it possible to convert an electric flatiron into a miniature stove. A cooking stand or frame is provided which can be attached to the handle of the flatiron. The flatiron can be turned upside down, rested on the frame, and the bottom of the iron makes a small stove, which can be used for heating water or keeping food warm. This iron is very convenient in case of illness where heat is needed quickly.

Electric fireless cookers are now manufactured. Electric coils keep the food warm after it is inserted into the cooker. Electric percolators are so convenient that every housewife wishes one after she sees how quickly they make coffee. In a short time many electric devices have been put on the market, and new ones are constantly being invented.

Heating a Swimming Pool.

By C. Teran.

A swimming pool is generally a luxury, not a necessity. For this reason not many are built, and a description of the system installed for Mr. Herbert Coppell at Tenafly, N. J., may prove of interest.

It is housed in a building of one story, and includes the pool room, two dressing rooms, boiler and coal rooms, all on the ground level. The pool is sunk below grade, is built of concrete, waterproofed and lined with English size enameled brick. It is 38 ft. long, 15½ ft. Wide and 6 ft. mean depth below water level. The cubical contents are, therefore, 3,534 cu. ft.

The heating plant was designed to heat this volume of water in 10 hr., or at the rate of 353 cu. ft. an hour. Ten hours is a convenient length of time for heating the water, because the required apparatus is not specially large. If the apparatus was much smaller it would, of course, require a longer time to heat the water, and this time added to that necessary to empty and clean the pool would make the period of time, which the pool would be out of commission too long.

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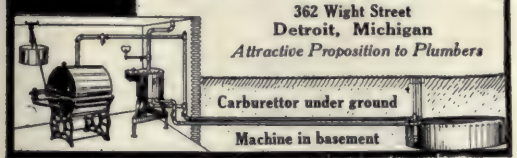
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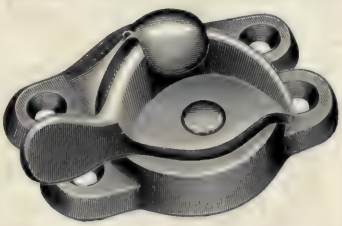
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The time required to empty and clean this pool is 4 to 5 hours.

The installation includes two castiron sectional boilers, a Berryman service heater and filter. The water is reduced to 30 lb. pressure on entering the building. It is then heated in the Berryman heater by steam generated in the boilers, and it is then filtered and discharged into the pool. For filling a main inlet is used; this enters the pool at the deep end near the bottom; there is also a nozzle above the waterline which is used to produce a spray over the pool.

On account of the proximity of the walls of the pool to the outside ground a loss of heat in the water was anticipated and provision made to replace the loss. Careful consideration was given to the various methods that could be used to accomplish this purpose and injecting water heated to a high temperature into the filled pool was decided upon. The reason for using a high temperature is that the water is not taken from the pool to be reheated, as this would necessitate a circulating pump, but fresh water is used, and by heating it to a high temperature a minimum quantity of water is required and less coal burned. Steam was not considered a good medium because it imparts a peculiar odor to the water, due perhaps to the presence of oil in the boiler. The water is injected at four points on each side of the pool near the bottom, through nozzles passing through the brick lining and flush with it. This arrangement gives a good distribution, and is neat in appearance. It is found that during the winter months the water loses 2 to 3° F. in 24 hours.

As a matter of precaution against a leaky pool the water pipes were installed so that they do not pass through the waterproofing of the wall of the pool below the waterline. This was accomplished by installing the pipes horizontally under the floor of the pool room and dropping branches to the proper depth in the pool between the waterproofing and the brick lining. All concealed water pipes are brass; other pipes are galvanized iron. The pool, which may be considered an experiment, has been so satisfactory that Mr. Coppell has ordered built a much larger pool 44 ft. long by 26 ft. wide, with the addition to his house and the equipment for the new pool has been designed on the same principles as the one described.—Heating & Ventilating Mag.

Dustless Ash-Handling System.

A recent issue of The Technical World, thus describes the "Rotary Ash Receiving System."

"A dustless ash-handling system, designed for dwellings, school buildings, churches, and like buildings, has been invented by a physician, with an idea of doing away with the unsatisfactory method of shoveling ashes from the ash pit into cans standing on a cellar floor.

A circular pit is excavated in the cellar bottom in front of and projecting somewhat under the furnace. This is lined with cement and in its center is a perpendicular metal shaft adapted to be revolved by means of a lever. A number of specially constructed galvanized-iron cans of the capacity of the ordinary ash can are set on the wheellike base of this shaft and are swung, one at a time, under the opening in the bottom of the furnace ash pit. The circular pit is covered at the level of the basement floor with top plates, one of which is removable to permit of the cans being lifted out when filled.

An ash chute may also be arranged to discharge into the pit from the kitchen range."

Perfect Combustion.

From Scientific American.

The ordinary coal-oil lamp is one of the best illustrations of perfect combustion and consequent smoke prevention. The heated gases rising in the chimney produce a draft, and fresh air is continually drawn in at the bottom through the hot gauze, which warms and divides it so as to insure thorough mixing with the gases from the burning oil. Turn up the wick and the flame becomes smoky—too much hydrocarbon for the air supply. Raise the chimney slightly from the bottom and again there is smoke—too much air at too low a temperature, which chills the flame. Insert a cold metal rod into the chimney and soot is deposited on it—chilling of the flame and disengagement

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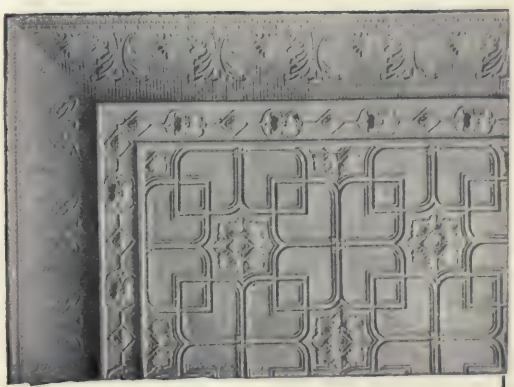
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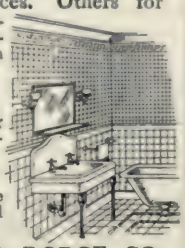
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of the carbon, while the hydrogen continues to burn. And thus we may learn of the three requisites for good combustion: enough air, a sustained high temperature, and a thorough mixing of the gases. The last two are so important that it is entirely possible to have an excessive supply of air and dense black smoke at the same time.

The Secret Of Fresh Air—Can We Discover It.

It is evident that the heating and medical professions have at last aroused themselves to a determination to discover the essence of good ventilation, or, at least, to learn the secret of what really constitutes "fresh" air. There is no denying the fact that the government tests in this connection, coupled with recent theories of medical experts, have given a distinct jolt to those who felt that practically the last word had been said as to the character of the atmosphere. At the same time the new attitude towards ventilation has done little to clarify the situation as far as actual practice is concerned. It is easy to propose schemes that will serve very well as temporary expedients, but which are far too troublesome or unwieldy for continuous use. That is the present difficulty in the way of the adoption of most of the new theories regarding fresh air. In other words, the method whereby artificially warmed air is to be given precisely the same characteristics as outdoor air at the same temperature and humidity has yet to be worked out for adaptation to a mechanical heating and ventilating plant.

The first steps in the important investigation about to be undertaken will be to identify this quality possessed by "fresh" air, which, it is claimed, is destroyed in passing through a modern heating system. The next step will be an effort to devise a mechanical arrangement of the ventilating apparatus best calculated to preserve the "freshness" of the air. While the details of the forthcoming investigations are not yet ready for publication, it may be said that influential members of both the medical and heating professions are co-operating enthusiastically on the project, and in one city have already secured facilities through the local officials for making the most ambitious ventilation tests ever undertaken in this country.

When the matter of frequent temperature fluctuations was proposed as one of the solutions of the problem of good ventilation, the opinion was expressed that it would be an easy matter to adjust the dampers in a hot blast or other indirect heating system so that currents of warm and, at least, mild air would be supplied during alternate intervals. The logic of this idea has recently been developed from the theory that human beings are most healthy when living an outdoor life. There they are subjected to continuous and often violent temperature fluctuations in the surrounding air, due partly to actual changes in the air temperature itself and partly to the cooling effects of the wind. Therefore, runs the argument, let us follow Nature and fluctuate our indoor temperatures.—Heating and Ventilating Magazine.

Changing the Air In Assembly Rooms.

Writing in the Chicago Tribune, under a department entitled "How to Keep Well," Dr. W. A. Evans states: "Last week at the Illinois Federation of Women's Clubs, the proceedings were interrupted about once every hour by the opening of the windows. While they were open the ladies stood up. After a few minutes the windows were closed and the exercises resumed.

"Ten minutes in that fresh air," comments Dr. Evans, "and those quickened minds were worth as much as any thirty minutes where minds are dulled and the air is stale.

"The scheme is physiologically and psychologically sound. Now, why can it not be followed in offices?

"The ventilation almost everywhere is bad. Most of it was put in on the old plan of uniformity of temperature and freedom from air movement. So much was planned. Not through planning but through oversight the air is usually harmfully dry. At this day we know there is no efficiency of mind and body unless the temperature varies and unless the air moves around enough to make its movement felt.



First Aid to Clean Living

"As essential as a bathroom or a kitchen sink."
"The best disease preventive I ever saw."
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SPLINTERS AND SHAVINGS

ONE of the interesting sights of the Clay Products' Exhibit just held in Chicago is a complete model bungalow of seven rooms. The plans for this building were selected in a contest for a prize of $1,000, and 666 plans were submitted. The bungalow is entirely of brick containing the most improved features of protection from cold in winter and heat in summer. The cost of the bungalow complete is $3,000.

Evolution in Bricks Shown.

Among the interesting features are exhibitions of "new bricks." This work is said to mark the greatest advance in the art of brickmaking. The "new bricks" are called tapestry brick, rug brick and Astrakan brick. Interior walls are on exhibition, constructed of the tapestry brick, and the effect is declared to be a warmth that is unsurpassed for fireplaces of every kind and for mission-styled interiors.

The rug brick is used principally for bungalow floors, and gives an effective impression of a soft carpet, yet containing all the wearing qualities of ordinary brick. The Astrakan brick is used both for interior and exterior decoration.

The height of artistic effect in the show is attained by the exhibitors of terra cotta. The north end of the Coliseum is adorned with a large water font, a reproduction of an ancient Roman font, and containing in colored terra cotta the identical effect which the original gave through its colored marble.

Sound-Resisting Walls and Ceilings.

Quite a little attention has recently been given in Germany to experimentation in the direction of methods and means for rendering walls and ceilings capable of effective resistance to sound transmission. One of the more recently devised methods involves the use under the ceiling, or parallel to the wall, as the case may be, of a network of wire stretched tightly by means of pulleys secured into adjacent walls and not touching at any point the surface to be protected against sound. Upon the wire network is plastered a composition formed of strong glue, plaster-of-paris and granulated cork, so as to make a flat slab, between which and the wall or ceiling is a cushion of confined air. The method described is said to be good in two respects: first, the absence of contact between the protective and protected surfaces, and second, the colloid nature of the composition recommended for the plaster.—Building Age.

The Architect—The Man of the Hour.

Extracts from Modern Sanitation.

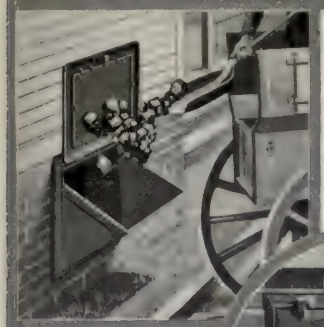
The architect is an indispensable factor in the construction of any building, and to begin building without carefully prepared plans and specifications would be a calamity.

The architect is no mere man who decides his vocation in a day. Often years are spent in travel, viewing ancient and modern buildings in foreign countries, reading up and learning the practical part of nearly every known appliance, building material or fixture; studying the particular devices, and reviewing the history of various formations, fabrications, matching them up with various conditions under which they may be used.

He must be well versed in tensile strengths of metals, he must know the effect of wind velocities, he must have well-formed ideas of elevators, ventilating systems, drainage, heating, plumbing and vacuum systems, and his knowledge of such apparently trivial items as wood, brick, stone, cements must be such that he alone shall decide the material best suited to give his client the greatest satisfaction architecturally and from the point of durability, economy, sanitation and comfort.

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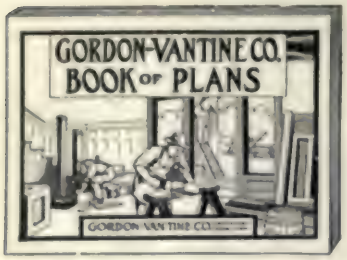
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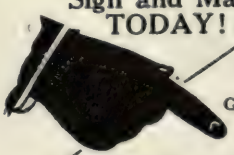
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New Booklets and Trade Notes

EVIDENCE of the increase in popularity of Asbestos "Century" Shingles may be noted from the fact that up to this time nearly every Department of the United States Government has used considerable quantities of this product and we understand that at the present time work is being forwarded at Pearl Harbor Coaling Stations, Hawaii, which work includes a not inconsiderable quantity of these materials.

The material is admirably adapted for all types of buildings, in any climate, under almost any sort of condition, and tests which are made periodically indicate beyond question, that the material becomes stronger and tougher from year to year, particularly if exposed directly to atmospheric and climatic conditions, as it is when applied to a roof.

There are three beautiful colors from which to select and a great variety of shapes and sizes, so that it is possible to adapt the Asbestos "Century" Shingle to practically every style of architecture.

The price list and booklet issued by the Asbestos Shingle Slate and Sheathing Co. is of more than ordinary interest to intending home-builders. While the public has become somewhat familiar with the Asbestos Century Shingle it is not perhaps aware of the extended uses to which this product is now devoted.

The booklet illustrates the different uses of Asbestos lumber, and detailed directions are given for applying it, together with architect's complete specifications and tables of sizes, weight and cost, giving the reader a clear and lucid comprehension of the matter. The booklet is sent on request.

* * *

The Tabor Sash Fixture Co., manufacturers of fixtures for every style of window as well as other hardware specialties, issue a pamphlet for architects and builders of rather startling interest, filled as it is with press clippings of deplorable accidents which their revolving window sash is claimed to largely eliminate. The Tabor sash is a good thing to get acquainted with.

* * *

The Bostwick Steel Lath Co. send out a small but most effective folder illustrating their metal wall plug, a new device for securing the interior finish to brick, stone or cement construction. Contractors and builders will do well to acquaint themselves with this invention.

* * *

The Webster specialties are attractively set forth in a handsome catalogue issued by Warren Webster & Co., Camden, N. J. These include governors, controllers and regulators for all kinds of heat and vacuum systems, together with a large list of the best apparatus and equipments for the installation of such systems. While the Webster system of steam circulation is familiar to most architects and contractors, they are large producers of the class of specialties illustrated and described in this catalogue, with an engineering staff to assist builders in the problems relating to them.

* * *

A little white booklet sets forth the claims of Atlas-White cement as the building material par excellence. It is attractively illustrated.

* * *

The E. N. Biegler Co., Chicago, manufacturers of waterproofing and insulating coatings for the protection of metal, brick and cement surfaces, have favored us with a booklet in which their products are set forth in a clear and lucid manner.

* * *

The Buffalo Forge Co., Buffalo, N. Y., claim a very superior design of fan which they call the Buffalo conoidal fan, from the prevalence of conical shapes in its designs. Their handsome booklet is filled with its illustrations and examples of its installment.

KEITH'S MAGAZINE

ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

THE JOURNAL OF MODERN CONSTRUCTION
IDEAL HOMES MAGAZINE

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TELL you what I like the best—
'Long about knee-deep in June,
'Bout the time strawberries melts
On the vine,—some afternoon
Like to jes' get out and rest,
And not work at nothin' else!

KEITH'S MAGAZINE

VOL. XXVII JUNE, 1912 No. 6



RUSTIC BUNGALOW WITH WIDE FLARING PETTICOAT OF REDWOOD SHADES.

Art in House Construction

Materials Used

By Helen Leukens Gaut

COMBINATION and agreement of building materials is a most important factor for consideration in planning a house, in fact, it is as important an item for thought as the design, for if the materials used do not unite pleasantly, the result is totally unsatisfactory.

Southern California, world-famed for the comeliness of its homes and gardens, shows greater variation and originality in its buildings than any other locality in the world. Here, an ordinary house, such as the term implies, is rarely seen. Every house shows individuality. Every house is a distinct and separate invention, the product of thought influenced by personality, environment and art. While the southwest boasts innumerable mansions owned by retired capitalists, the chief architectural charm lies in the grace and wealth of bungalow homes. Splendid effects are obtained by cleverly combining various building materials. Like the skilled cook who throws into her mixing bowl an unmeasured bit of this, and an unmeasured bit of that, and turns out a delicious pudding, the clever archi-

tect throws in a plank or stone here, a tile or a shingle there, and the result is a charming and original house. The favorite materials used are shingles, shakes, cement or stucco, rustic tiles, malthoid, klinker brick, cobblestones, field stones, heavy rustic timbers, etc. Frequently many of these are used in the construction of one house, and it is not at all unusual to find a mixture of four or five, the whims of originality, as does rustic. Unlike the little old-fashioned cottage that looked as if a whiff of wind might blow it away, the bungalow has an appearance of strength and sturdiness that inspires confidence and friendship. Eaves are invariably wide, from three to six feet, and in most cases are supported by brackets of massive redwood timbers, rough and shaggy as the day they were



THE BACKBONE OF MOST OF THE BUNGALOW SCHEMES IS RUSTIC.

in chimneys, foundation, side walls and roof of a single house. To combine materials successfully requires best of ideas and management. There seem to be no positive rules for building a bungalow, and usually entire freedom of expression is permitted.

The backbone of most of the bungalow schemes is rusticity, though occasionally one finds a smooth-faced little house, painted and spick and span as finished lumber and mitered corners can make it. Finished lumber for the exterior of bungalows has been very nearly ostracised, for it does not lend itself to slashed from the father trunk. Rafters of Oregon pine or California redwood 2x4s or 2x6s usually extend from four to six inches beyond the edge of the eaves, and add both to strength and ornamentation. In many bungalows heavy bargeboards, sometimes 2x12, are featured, the face broken at regular intervals where the brackets connect by large square blocks put on in Craftsman fashion. Sometimes the eaves are ceiled with beading which is painted or varnished, but usually they are left open and rough. It is always a problem to decide which of many materials will be most suitable for



EAVES ARE INVARIABLY WIDE AND IN MOST CASES ARE SUPPORTED BY BRACKETS OF REDWOOD TIMBERS.

a roof, which will harmonize best with the design and the exterior walls. A few years ago practically all roofs were of shingles painted dark brown or green. Then for a time the shingled roof painted pearl gray was a fad, in fact, it was so attractive its popularity continues. The shingled roof painted white is also seen,



THE SILVER SWEEP OF THE ROOF IS UNBROKEN, AND CONTRASTS HEAVILY WITH THE SURROUNDINGS.

and is exceptionally pleasing, for it affords strong contrast with the landscape, and contrast is always good. Occasionally one sees a roof that has been tarred and sanded and stripped with wood, and again one finds houses roofed with patent compositions in black, gray or red, which are both serviceable and good looking. But the roofing that is best liked for bungalows, and which adjusts itself to all types and lines, is snow white malthoid. not seem appropriate for other than a brick, stone or stucco house.

Side walls can be, and are, constructed of many different materials, sometimes singly, sometimes combined. A harmonious plan is to have the slightly flaring base of roughest pebbledash cement, in color light gray. Topping this and forming the lower window casings, have a heavy dark timber that circles the house like a clamp. Above this, walls to be of



FREEDOM OF EXPRESSION IS PERMITTED IN BUNGALOW BUILDING. HERE SMOOTH AND ROUGH PLASTER ARE COMBINED IN THE CHIMNEY; WALLS ARE OF SHINGLES AND SHAKES IN ALTERNATING WIDTHS, AND THE ROOF IS OF MALTHOID.

With its edges rolled over a 2x4 timber above a dark bargeboard, it is wonderfully effective. Sometimes dark wood strips are nailed over the seams, sometimes the silver sweep of the roof is unbroken. This malthoid is less expensive than shingles and is quite as durable. It is also used for flooring balconies and roof gardens, and almost invariably is wrapped over the heavy wood edges like piping on a dress. Shakes make an effective roof for the rustic bungalow, but are apt to leak. Nothing is more attractive than a roof of red tile, but this does shingles or shakes stained dark green or brown. Another good scheme is to have the base of rustic clapboards, the boards stopping flush with the ground like a full-length skirt. Sometimes the base is of boards and batons, and the upper portion of shingles, shakes or clapboards and sometimes the arrangement is exactly reversed. Sometimes boards are put on horizontally, sometimes vertically, while there are many ways of putting on shingles or shakes, in straight even lines, or in alternating widths. The latter always combine well with all sorts of ma-

sonry, artificial stone, field stone, cobblestones, brick and stucco. The shingled house requires an inner sheathing of building paper or boards set diagonally.

A bungalow without a big imposing chimney is only half a bungalow, for while the chimney ornaments the exterior and gives it a certain character, the fireplace within is the heart, about which the social and restful elements of the home life radiate. The placing of the bungalow chimney is a matter of choice. It may run up the back, the side, or the front wall; in fact, some of the most interesting bungalows have a huge chimney at the front. There is no law for design for a chimney, no rule for mingling materials. The builder can follow his inclinations, consequently there are breeds and species of chimneys. There is the chimney of cobblestones of uniform size, placed in the cement with painful precision, with sides trowled down masonry work.

The design and workmanship and materials used in the front door, which is the chief welcoming keynote of any house, is given careful consideration nowadays. The conventional stock door has lost its popularity, and one of individuality has succeeded it. The door expressing personality has a charm all its own, which the visitor immediately recognizes and appreciates. A competent carpenter can easily, quickly and economically make a door from design, employing rough redwood, lattice or bevel glass, iron bolts or scrolls, in its construction. Such a door will belong to the house for which it is made, a sort of introduction between the guest and host.

smooth and straight with cement. The most attractive cobblestone chimney is that in which both small stones and huge boulders are placed, regardless of system or size, and the sides, though holding to a definite line, are broken by the curving, bulging stones. Cobblestones and klinker brick combine admirably for chimneys and foundations. Red brick, white pressed brick, cement and broken field stones are all popular for bungalow



COMBINING MALTHOIDS, SHINGLES, CLAPBOARDS AND PEBBLE-DASH CEMENT, AND SHOWING GOOD RESULTS OF USING RUSTIC, CRAFTSMAN FASHION, WITH THE PORCH PIERS.

Vine Clad Arbors for Yards and Grounds

By Casper Greiner

UNDER the broad term of arbors may be included such varieties of garden architecture as pergolas, bowers, trellises and arches over gateways and garden paths. Indeed, in recent years, so varied have become the forms of pergolas that, in reality, one can hardly be expected to distinguish between them and the arbors. The latter, however, more strictly speaking, are summer houses, whereas the pergola is made up of a series of columns in a double row, connected by beams or poles that are crossed or interlaced overhead. Bowers, trellises and arches explain themselves. But, by whatever name such structures are called, a garden is hardly complete without something of the kind with its refreshing shade, its inviting coolness and its luxurious growth of vines.



A Sloping Garden Lends Itself to a Really Decorative Pergola.

Arbors may be as simple or as elaborate as the builder desires, but, in the end, simplicity is far more to be commended than the elaborate construction. Simplicity, in fact, should be the aim in building such structures, whether the builder's purse is long or not. They can be constructed of wood or of reinforced concrete, and the difference between the first cost of the two materials is far less than most persons imagine. The concrete construction, of course, has the advantage—it needs neither paint nor repairing and to the surface of the composition many vines will cling that will fail to find a hold on wood.

Concrete again serves the man with limited purse to excellent advantage when he wants a lily pool or a fountain. If only he will content himself with designs that do not require curved moulds, he can have what he wants at very little cost. A square fountain or pool, eight feet long, four feet wide and two feet deep, made of concrete, should cost less than $5.00.

Garden benches, tables, lanterns, figures and sundials are all within reach of the most limited purse. Seats may be constructed of wood at very small cost, or of concrete at practically the same expenditure. I know that the popular impression is that concrete is expensive, but I have found, after many years' experience with wood and cement, that the latter, in first cost, is not more than ten per cent. greater than the wood and—it lasts forever. I have made benches of wood and of concrete, and, at the end of twelve

months, counting the painting and repainting of the wood, the bench made of this material has cost me more than the bench made of concrete. Such a seat, twenty inches wide, seven feet long and four inches thick, can be made at a cost of a little more than the wooden seat.

In sinking the posts for arbors or pergolas, arches, trellises and bowers, it is always best to treat the ends that are to go into the ground, whether the lumber is dressed or rough as it comes from the woods, with some preservative preparation. Any dealer in paint will be able to supply a satisfactory preparation of this sort at very reasonable prices, and, through its use, the structure will stand many years longer than it would were the posts untreated. An excellent plan to follow is to use no preservative, but to sink the posts in concrete. To do this, dig a hole six or eight inches larger in diameter than would be necessary for the post alone and six or seven inches deeper. On the bottom place a six-inch layer of concrete, made up of one part cement, two parts sharp sand and four parts small gravel. When this has set, but before it is entirely dry, place the post upon it, setting it in the center of the hole, leaving a space an inch or two wide on every side. Then pour the concrete into the hole, tamping it as it is poured. Bring the concrete filling to the surface of the ground, smooth it with a trowel and the work is done. Posts thus set are not only well preserved but they have a rigidity that can be got in no other way. To set four posts in this manner will cost little more than the preservative—probably $1.50, with material to spare.



RUSTIC PERGOLA WITH GARDEN SEATS.

Pergolas, like arbors, may be as simple or as elaborate as the owner wishes, but here again the best taste counsels

simplicity. Pergolas may be of the rustic style of architecture, but, generally speaking, they are best treated more formally. The posts should be of finished lumber—preferably columns such as are used for porches—and these should be set no closer together than seven feet, lengthwise and transversely.

If wood is the material to be used, dressed lumber may be obtained from the lumber dealer, or the builder may draw upon the nearest woods for his supply. Rustic effects, always pleasing, are gained by resort to the latter source of supply. Many farmers have no objection to parting with undergrowth and, in not a few instances, will permit the arbor-builder to have what he wants for little or nothing. Saplings, especially hickory, yield excellent wood for such structures. Larger growths afford material for posts and roofing, for beams to support seats and for such railings as may be required. In constructing roofs of this rough material, lay the pieces so that the butt of one is adjoining the tapering end of another—as is shown in the accompanying illustration of the rustic arbor. It is by no means necessary to depend on a lumber mill for the supports to the roof, for, with a little patience, small trees can be found that will supply the exact shape required. Tie the saplings in place with galvenized wire or strong copper wire; to attempt to nail them means, in nine cases out of ten, un-



THIS ARBOR IS EASILY MADE AND ESPECIALLY BEAUTIFUL WHEN COVERED WITH VINES.



SIMPLE ARBOR, EASILY CONSTRUCTED.

sightly split ends that will always be an eyesore.

It is easy to construct of concrete a simple garden pool or fountain.

The form for such a small excavation can be made as one would make a box, the bottom, of course, being smaller than the top in length and width, and the whole twelve inches less in length and twelve inches less in width than the hole. When set in the excavation, as can be readily seen, there will be a six-inch space between the wooden form and the earth sides of the hole on every side. Pour into this space concrete made of one part cement, two parts sand and two parts small gravel, tamping as the concrete is poured in.

I have said nothing about inlet or outlet pipes, for the reason that their use is obviously necessary, and the builder will find it the easiest matter in the world to put them in to suit himself.

Every garden should have some sort of entrance—some point from which it appears best when approached. Wherever practicable the entrances should be arched, or, if desirable, a pergola may be constructed to lead into the garden. This, in truth, is the best use and the only genuinely legitimate use we have for a real pergola. It is an arbor that should lead somewhere. If not to the garden, then, in the garden, so locate it that it will lead invitingly to a summer house, a garden bench, a fountain or a sundial.



THE CARPENTER SHOP BECAME THE KITCHEN WITH A LATTICED BACK DOOWAY ABOUT WHICH GREW VINES AND PLANTS.

An Old Farmhouse Remodeled

By A. E. Marr

THOSE who have experienced that rare pleasure of making over an old farmhouse are loud and persistent in their efforts to induce others to attempt the problem. The pleasure is not so much in having "something new and something old," that is, it is not the combination of the old and the new that gives you so much enjoyment, as it is in adding modern comforts and conveniences to old, stately dignity and sturdy durability, and the pleasant tax that this is on the ingenuity and the creative ability.

It is a delight to work over one old house, almost anyone will admit that, but to work three into one, a woodshed and carpenter shop, if you please, may sound like rubbing that most wonderful lamp of Aladdin's, and bidding the genii to get busy. But there being no magical lamp, two women did the work

A glance inside showed them that although it had stood for a hundred and fifty years, it was still well preserved with its rafters hewn and shaped by hand, plain doors and built-in cupboards with hand-made iron hinges on the doors, and brick fireplace, and that they had what are the first essentials—an opportunity and a good foundation upon which to build and improve.

The plans, as you will see, depict the house as a long, oblong structure with two separate buildings at the rear, a wood shed and a carpenter shop, which gave them the idea of further possibilities. A small vestibule at one end of the house opened into the kitchen, and from there they passed into the large living room, and a small bedroom adjoining it. Upstairs under the eaves was a second chamber reached by a very narrow flight of steep steps leading from the living room. Here in this nest of a cottage at least three generations of children had been brought up, and had laughed, and cried, played and pulled each other's hair perhaps, but had gone long since forth, leaving behind them that spirit of good comfort and heart ease which only may be found in the old places.

But it was not quite what they wanted, and the next few days they spent in the village scheming and figuring on how to remodel this little cottage into a desirable home, with the least possible expense. The photographs and the floor plans tell the story.

The main lines of the house were left untouched, with the exception of repairs to the shingles and a good coat of white paint. The kitchen was the first point of attack, and here a reformation scene such as only two energetic women can portray quickly took place. The original stuffy appearance was overcome by enlarging the vestibule, and adding a small covered piazza which led into a light, roomy reception hall, furnished with antique chairs and a table gathered in while on one of their tours of the village. Leading from the right of this room or hall was the living room, which was pre-



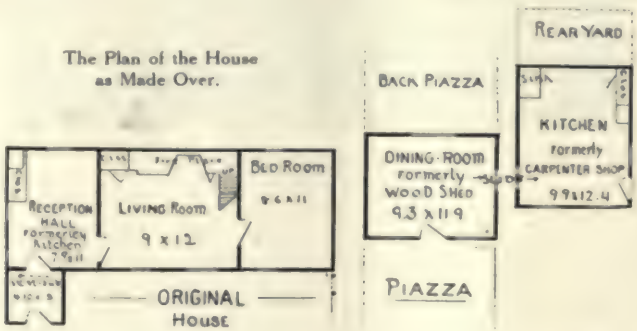
A CORNER IN THE DINING ROOM, FORMERLY THE WOODSHED.



TRELLISES, ARBORS AND THE TWO PIAZZAS ADDED TO THE PICTURESQUE FARMHOUSE.

served with its quaint, time-flavored simplicity. The old brick fireplace and crane were flanked on one side by a high, built-in cupboard, whose very hinges were made by hand, and on the other side a closet for firewood extended back far under the stairs. This room was left as they found it, with the exception of repapering, and giving a coat of stain to the woodwork. The chamber adjoining the living room was retained just as it was, while the room above, reached by a flight of very steep and narrow stairs, was made into a pleasant guest chamber. The woodshed, in excellent condition, was moved up to the main house and became the dining room. A large covered piazza with latticed posts for vines to run on was added to the front of it, making really two rooms, one for ordinary use, and the other an outdoor dining room for pleasant days.

The Plan of the House as Made Over.



The estate was fast growing, and they needed now but the kitchen to complete the home. The one-time carpenter shop was moved up and joined to the kitchen, connected by a slide cut in both rooms, through which dishes could be passed

back and forth. Cupboards and closets, a sink and a stove soon converted this shop into a modern kitchen entirely separated from the main house, and overcoming at once the problem of unnecessary heat and odors. The loft above was made into comfortable servants' quarters reached by an open flight of stairs leading directly from the kitchen.

Trellises and arbors hid the back yard from view, and the two piazzas in front added to the picturesque farmhouse. From a simple cottage of four rooms, they had brought forth a commodious country house of seven rooms, still retaining all the charm and atmosphere of the old-time home.

The planting of old-fashioned flowers and shrubs finished the task, whose every detail had been a pleasure. By that I do not mean that everything was sunshine, for it wasn't. There were days when they simply rolled their hands up in their aprons and rocked in the old-fashioned chairs until the inspiration came and they could agree on what was next to be done. But when you consider what they have now, and that all of the alterations and changes, painting, papering, and everything, was done for a little more than two hundred dollars, it would seem perfectly ample to compensate for a greater expenditure and less real pleasure.

So it is well to remember, that often in an old wooden house a golden room we find.

Matting and Its Use in the Summer Home

THE summer cottages and bungalows are becoming each year more and more popular. The opportunities they afford for the simple life attract many people who, tired of city life, welcome the change. The restful quietness, good air and the out of door pastimes are needed by every one for a short period, at least, each year.

For many the bungalow is an extra luxury, so the question usually is how to make it most attractive and comfortable with the least outlay of time and money. It is a wise and economical plan to have as much of the furniture built in as part of the building, as can consistently be done. Seats, shelves, cupboards and dressers, when built in this way, save money and where space is limited give much additional room. When they are fitted with appropriate cushions and draperies they give a charming appearance of comfort.

The importance of beauty in the little things of the household, with those purely ornamental and those intended for practical uses, is a creed which all masters of the arts and crafts are striving to teach.

For the summer home especially it is not desirable to have either furnishings or decoration elaborate, but rather keep them both simple and restful. The country home porch is usually a summer living room and it should be furnished as tastefully as is the indoor living room in winter. The housekeeper naturally feels that the materials used should be inexpensive, yet desirable and lasting. Cool, easy to keep clean and with good wearing qualities, matting seems to answer



THE WALLS, SCREEN AND FLOOR RUG OF THIS ROOM ARE MATTING, ALSO THE CURTAIN VALANCE AND SIDE HANGINGS.

many of the wants in summer furnishing. As rugs for porches and indoor rooms it is very satisfactory. The best grade of fine, smooth weave Japanese matting in the natural color is the best to use. This color takes a stenciled decoration most beautifully. The matting is cut into desirable lengths and can be joined by sewing it with a loose over and over stitch, using a heavy cream linen thread for the purpose. The ends are finished by raveling out the matting for four or five inches, then knot the strands in bunches of six or eight, tying it tight and close to the last strand of matting. Or it can be turned up for two inches and hemmed, and a heavy linen furniture fringe caught firmly to the hem from underneath. The fringe should harmonize in color with the decoration on the rug.

If a beginner in stencil work, the design should be kept simple, straight line effects giving good results and are easily cut as well. The design should be drawn full size on any kind of tough thin paper and transferred to the stencil board by using a sheet of carbon paper, dark side down. Carefully transfer the design, lifting it here and there to be quite sure every line has been traced, for when the pattern has once been removed it is hard to replace in the same position. Place on a piece of window glass and with a sharp pen knife cut out the design. When this has been done, fasten the matting firmly to a table if possible, as it is rather unmanageable unless well fastened to prevent slipping. Next block off where the decoration is to be, putting in pins or pencil dots to know where the proper repeats are to go. Oil paints thinned with turpentine and a regular stencil brush about the size of a dime should be used. Do not get the paint too thin, mixing each color in a separate dish, and if possible have a brush for each color. Try on a small piece of the material until the right colors and proper consistency of paint has been decided on. Fill the brush well, then wipe off any extra paint on a cloth before applying it to the matting. Hold the brush almost at right angles to the surface and well down towards the bristles. Now steady the stencil with the left hand and work the color out of the brush into the fabric by rubbing the brush back and forth in the spaces of the stencil. Work with smooth, rapid, even strokes, and when dry go over with a warm iron to fix the colors. A design worked out in orange, brown and black for rugs, can be repeated in the woven raffia pillows and floor cushions.

Matting, while very artistic in effect, is of course not suitable for all rooms. In a formal drawing room, it would be distinctly out of place, but in a study or den or in the living room of a summer cottage it is very pleasing. It can be used as a wall covering complete, for panels, or as a dado. For a dado, take a strip of the Japanese matting without design, measuring it the length of each wall, or if seams are not wanted at the corners, one strip can run entirely around the room. It is very easy to put in place with fine carpet tacks, later using the large brass furniture nail heads nicely spaced as a decorative finish. A chair rail corresponding with the woodwork in the room gives the necessary finish at the top, or strips of split bamboo can be used instead. The decoration can be stenciled on before the matting is placed on the wall or after, as seems most convenient. Any simple conventional form can be used, the more severe in outline the more dignified in effect. For instance, let the design run up and down, a single form repeated at intervals, and separate the spaces into panels by strips of flat moulding or bamboo. A quaint design suggestive of Japanese treatment, in a delicate tracery of plum or cherry

blossoms, can be stenciled along the side that goes at the top. The branches should not be too close together nor the blossoms too thickly clustered. The color scheme could be soft dull red, gray green and brown.

Matting can be used for the porch curtains, using them in sections the width of the matting, or several widths can be joined together. They should be decorated to correspond with the rugs and pillows.

A pine tree design for the curtains in the mountain home, using the cones and small branches for the smaller surfaces, pillows, table runners and screens, is attractive. These can be done in dull browns and greens. Screens for the porch to soften the light or as a protection from draughts are often a necessity. Or to be used in a room to hide shelves and their contents; to partition off certain spaces, and to shield entrances from one room to another, a frame of bamboo or of any ordinary wood can have panels of matting introduced, the material being fastened to the frame with large brass tacks. If casters are attached to the frame, the screen can be rolled wherever needed more easily. And, too, if fitted out with pockets of denim, in various sizes, on the inside, for sewing materials, magazines and papers, it will prove a positive joy to the owner.

The straw covering that comes from tea boxes can be used quite as well as matting for small things. It is soft and pliable to use for the porch pillows and floor cushions so much needed in summer time. Cut two pieces the desired size and baste linen tape of any dark contrasting color round the edges; turn tape over the edges and baste down on the other side. When both pieces have been so treated they can be fastened together and the sides and bottom buttonholed through, forming a pocket, the two upper edges to be overcast separately. This may be done with colored raffia or a narrow tape dyed the desired shade. Instead of being fastened together they may be buttonholed separately and eyelets made in the back. They can then be tied together with tapes or raffia to form a hinge.

For a newspaper rack, cut a strip of matting about twenty-one inches long by twelve wide. Fold the lower end back about seven inches to form a pocket, fastening it at each corner with a piece of twine, leaving the sides free. Turn the raw edges back toward the front and cover with a scalloped piece of red ooze leather, fastened with brass paper fasteners. A narrow strip of leather forms the hanger, which extends down the sides, ending in a leather tassel. This can be decorated in old blue and dull red.

A scrap basket is a welcome addition to both bed and living room. Cut a piece of matting 45 inches long and 16 wide. Have the selvaged edge come to the top and turn back the two short edges one inch. Stencil a design on this, spacing the units so that the joinings will meet nicely. Cut a circular piece of heavy pasteboard for the bottom. Now with either a piece of colored tape or a strip of thin leather, about two inches in width, join the matting to the bottom. Baste to the matting first, then sew on the machine to make it stronger. Then the bottom is added, the tape being easily fastened at short intervals. Now join the matting at the 16-inch sides by a criss cross stitch in raffia, either in the natural color or to match in tone the decoration. With a leather thong or piece of tape to draw it slightly together at the top, the basket is finished.

The illustration shows some interesting and attractive ways of using matting. The walls, screens, curtains, valance, pillows and table runner of matting, with the same decorative motif carried out in stencil, giving a charming result.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.



BRIARWOOD IS A PART SHINGLED BUNGALOW WITH FOUNDATION OF LOCAL FIELD STONE.

Two Low Cost Bungalows

THE growing demand for wholesome outdoor living has resulted in the building of summer camps and bungalows in all parts of America. While some of these buildings are of low cost and extremely simple, others are elaborate and expensive.

A bungalow, being a warm weather house, should have, above everything, a wide and roomy veranda, and should be built on a site where wholesome living and pure country air can be obtained

The bungalows illustrated are located in a half-mile square of forest and hill country on a high picturesque part in Delaware county, Pennsylvania. Briar-



The rooms are unusually large at Briarwood and are well lighted and cheerful; the rafted roof and generous fireplace are both good decorative features in keeping with the furnishing.

wood is a most substantial bungalow, and has been built with a cellar and heater so that it can be used as a week-end cottage in winter if desired. The foundations and chimney are of local stone, but the bungalow is of frame covered with sheathing board. The roof is covered with shingles which have been stained green. The large air chamber on the second floor keeps the house cool in summer and is invaluable for storing purposes. The interior walls are plastered above the chair-rail height, but below the boards are left exposed. They are oiled and a little color added to the oil before being applied. All the interior woodwork is treated in this manner. This bungalow is equipped with a primitive bath room, although there is no running water in the house, as all the water has to be carried from the nearby pump. There is only one bed room in the bungalow but extra sleeping room is provided on the veranda, it being the custom at Arden to sleep in the open air. The owner being a trained nurse, finds her bungalow invaluable for recuperating between her cases, and is generous in sharing her home with other women who have not the same opportunity to enjoy the country. Briarwood cost to build about $2,000.00.

Excavating and Masonry...	$ 300.00
Lumber and Mill Work....	800.00
Plastering and Staining Shingles	300.00
Roofing	250.00
Heating and Miscellaneous.	350.00
	$2,000.00

The other bungalow, also costing about $2,000.00, has been built step by step. If it had been built at one time, several hundred dollars could have been saved, but the owner designed it herself and carried out her ideas gradually.

This bungalow is of frame with walls and roof covered with shingles. It is beautifully situated on a rising part of the camp.

The bungalow is particularly roomy, has three bed rooms, a kitchen and dining room are provided, and yet the main living room is commodious and attractive. One of the original and pleasing structural features is the roof over the door. This did not entail much labor or expense, but it immediately gave the bungalow character and saved the cabin from being merely a barn to sleep in. A pergola of unbarked wood is not only a novel kind of veranda, but gave the owner con-

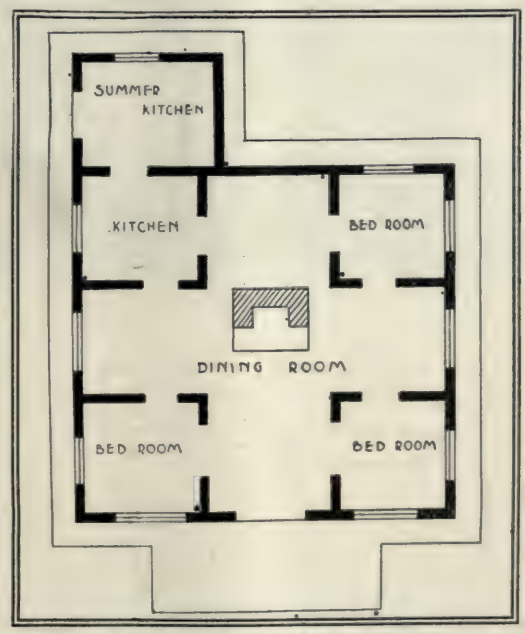


The shingled bungalow has three bed-rooms, a kitchen and a dining-room and living-room. By drawing the curtains back the dining-room and living-room seem like one large room.



A PEACEFUL, INVITING SUMMER HOME.

siderable pleasure in planning and putting it up; next summer it will be a wealth of green that will not only add to the general appearance of the bungalow but will serve to keep it cool by shading it from the sun.



FLOOR PLAN OF ABOVE COTTAGE.

Furnishing the Summer Cottage

By Margaret Greenleaf



SILVERY BIRCH TREES FORM THE STANDING WOODWORK.

AT THIS time of the year, an increasing number of persons are interested in furnishing a seaside cottage, a mountain bungalow, or a week-end camp maybe, and making it —at the smallest possible outlay—comfortable and attractive. For such a summer home there are many built-in pieces of furniture which will prove a great saving of expense as well as add to the beauty and convenience of the rooms.

Excellent examples of such built-in pieces may be seen in the view of an unusually delightful bungalow which is here reproduced. In the interior of this the silvery bark of the trunks of the trees is left in its natural state, forming much of the standing finish of the room, and the young saplings have been used for the lattice work, forming divisions where the wood trim permits. A silver gray stain of the same color and finish appears

on the furniture. Dull blue is the predominating tone of rugs and draperies, and, together with the entirely rustic idea which these rooms convey, there is a comfortable and homelike air which is very inviting. In a modest way this same treatment can be carried out in the small and inexpensive bungalow. The rough stone fireplace shown here is entirely appropriate and fills one end of the room. Also, the lighting fixture which



The excellent plan of living-room and library, with the fireplace in the center of the cottage, gives a feeling of size and hospitality that would be impossible were the rooms divided.

holds large candles is interesting, as being consistent with the type of the room.

In using old furniture, such pieces should be selected as are light in construction and which, in line at least, can claim some relationship, and though these may show a variety of wood and finish, it is possible to bring them together by enameling them all either with ivory white, leaf green, or some other suitable color. If preferred, the old finish may be renewed and the wood re-stained and all finished alike. The enamel, however, is more practical and really gives a better effect. Where one finds these old pieces entirely out of character with the little house they should not be used. It would be better to have built-in bunks for beds, with a wall shelf with a mirror above for a dressing table, than to put into a semi-rustic, low ceiled room a ponderous piece of old walnut furniture, or other such incongruities.

The big room should combine living and dining rooms and have a generous fireplace at one end, with an abundance of casement windows and French doors, which will admit much of the beauty of the outdoors, and air and sunshine. Wide, comfortable window seats well cushioned, and a low reading and writing table, suggestive of the Mission type, placed about the center of the room, built-in inglenook seats, or bookshelves to flank the fireplace, and in the end of the room, next the door leading to the kitchen department, a corner cupboard with diamond paneled glass doors will be found useful and decorative.

There is an arm chair which is very comfortable and of wood frame with cane seat and back, known as the McKinley arm chair. That also would readily find

a place in this room. If any pieces of upholstered furniture are to be used, a wing chair covered with the linen taffeta, domestic or imported, would look well.

In selecting the fabric for upholstering window seats and making door curtains —the latter may or may not be necessary —a material which is not too heavy should be chosen. The least expensive which would give satisfactory wearing quality would be a figured denim. This comes in some very good colors and shows a two-tone effect in small figure. There is a moss green and dark, dull blue, either of which are acceptable in many color schemes. This can be used to upholster window seats, cover cushions for any of the chairs which require them, and also is a good choice for covering a wing chair, unless the scheme of the room makes it possible to use a figured linen taffeta for this, in which case the design should introduce the various colors appearing in rugs, side walls, draperies, etc.

For floors the first essential is to finish them in such a way to insure at least a season's wear without undue care in keeping them in good condition. Therefore, a good floor finish is recommended, and preferably one showing a high polish. The finish we have in mind may be wiped up with water and does not require polishing. It does not mar readily or show heel marks or scratches. If the floor is made of rift sawed yellow pine it will not require a filler, and should have three coats of this finishing material. In choosing rugs for a room of this kind some latitude is allowable, although an inexpensive and durable rug would be more suitable than a richer one. There are Chinese matting rugs made of twisted straw which show on the yellow background of the matting which are very decorative. These are light in weight but are not inclined to curl at the corners. They may be easily removed for cleaning purposes, which is one of their chief recommendations. The fiber rugs, the reversible Scotch rugs and the bungalow rugs are all suitable for the summer home, and even among the Brussels rugs one may find designs and tones which are



The woodwork is stained a warm brown and tones well with the stenciled burlap panels on the upper walls of the living-room. The fireplace and mantel are worthy of consideration.

sufficiently quiet and cool looking to be appropriate to such a room.

In the room we have in mind the rugs chosen could be of Chinese matting, one 9x12 and two smaller ones, all to be purchased within $20.00. The draperies at the casement windows are of coarse linen crash with a stencil border in shades of delft blue and water green, repeating the colors and the figures of the rug. The crash sells for 10 cents a yard, and as the stenciling can be done by any amateur it will be seen that the cost is small. Window seat cushions and door curtains are made from the dark delft blue denim, which sells for 70 cents a yard. The door curtains show a border in white and green outlined with black, repeating the design in a larger degree than shown on the white curtains at the windows. The reading table wears a lengthwise scarf of this crash, the ends ornamented in the same way. At one end of the table may be placed a large writing pad, ink well and the general paraphernalia of the desk. About in the center of the table the reading lamp should stand. A dull brass jardiniere could be utilized for the base of the lamp and fitted with glass for the oil. A spreading raffia shade lined with water green silk would complete this. In the end of the room, near the door leading into the service department, and set well opposite a window with a good outlook, a small round table should find its place. This to be used ordinarily and for breakfast and lunches. Such a room as we have described can be fitted completely for less than $100.00, and this, it must be remembered, is really two rooms, and the furniture recommended has good wearing qualities, and its perfect simplicity will insure that the people who must live with it will not tire of it.

Construction Details of the Home

Plumbing Fixtures

The Water Closet.

A water closet should possess a trap within itself, having a good seal, and with as little surface to come in contact with the soil as possible. The trap seal should be exposed to sight and the flushing should be noiseless and economical in the use of water and should come from a tank not directly connected to the water system.

The leading patterns of water closets in use are the washout, washdown, siphon and siphon-jet. Of these the two former are used in the cheaper work, and the latter in more important work and are best to use with a low down tank.

Local Ventilation.

A local vent spud, as it is called, is sometimes provided in the design of the water closet from which a vent pipe is run into a partition and from there into a hot vent flue. This carries off foul odors incident to the use of the closet. A small register face placed in the wall behind and at a level with the seat, connected by pipe to the flue, will effectively vent the whole room. Tin pipe, three inches in diameter, is often used and conducted into the main smoke flue high up in the chimney.

Flush Tanks.

High flush tanks have been in use for a long time and are reliable because of the "head" obtained by the water in the distance traveled.

The tank is usually placed in sight, but may be on the attic floor above or in an adjoining closet. The flush pipes

may be in sight, concealed in the partition or through the wall in a clothes closet.

The low down tank, if placed in the room, sets the water closet further from the wall than with the high tank. Unlike the high tank, the low tank is closed at top with a moveable cover, keeping out all dust and dirt. Its position makes it easy to adjust or repair. The flush pipe should be two inches for this fixture.

Flush Valves.

Flush valves may be used on high or low pressure or direct or tank pressure, are noiseless and may easily be concealed. Provision is made for placing them in the floor if desired and their neat appearance has made them popular. Several different makes are on the market and should be carefully studied before making a selection.



Wash Bowls.

Enameled cast iron and procelain lavatories are cast in one piece, including the back and bowl, thus avoiding all joints. Marble is no longer popular for plumbing goods owing to the necessary joints, and its ready discoloration. Many patterns are available and may be supported on legs or on brackets in sight or concealed. The illustration shows a bowl with a practical installation of piping except water supply.

Bath Tubs.

Enameled cast iron bath tubs with wide roll rims are used more than any other. Porcelain tubs are used only in the very best work and enamel painted or copper-lined tubs not at all. The tub five feet long is most popular, although four feet six inches is allowable where space is restricted. Four-foot tubs are not comfortable and tubs exceeding five feet use a great deal of water if filled each time, an item to be considered with only a forty-gallon hot water tank, the usual size. A drum trap is shown in the illustration of bath tub installation, with 1½-inch vent and waste pipes. This trap can be more easily cleaned than any trap in this position.

Foot Bath and Sitz Bath.

These fixtures are used only in the best residences and the piping in general is identical with that for the bath tub.

Shower Bath.

This fixture is set upon the floor and requires a 1½-inch connection.

The Kitchen Sink.

The kitchen sink is made of plain galvanized or enameled cast iron, slate, soapstone and porcelain, the enameled

cast iron sink being most in use. A good size for a kitchen sink is 20 inches by 36 inches, the width and length being sufficient for two dishpans. Backs are made in various heights, finished to match sink. It is well to have the hot water connection to sink taken off from the top of the boiler, as the water gets hot quickest and remains so longer at this point.

Laundry Tubs.

Laundry tubs are made of porcelain, enameled cast iron, soapstone, slate and artificial stone. Three tubs may be drained, trapped and vented as shown by the illustration, the waste two inches and the vent one and one-half inches. For a two part laundry tub, waste and vent may be one and one-half inches. Artificial stone tubs, if carefully made, give good satisfaction, are all in one piece, sanitary and are much used in inexpensive work.



A MODERN BATHROOM.

Refrigerators.

Refrigerators are not connected directly to the drainage system, as stated under "wastes." The illustration shows the method of installation using a 1¼-inch waste pipe of lead. Larger lines should be of galvanized wrought iron.

Water Supply.

The water supply for the plumbing fixtures of a residence may come from the city mains or, if there is no provision of this kind, from some source from which it must be pumped as well—cistern, stream or lake.

When taken from the water main in the street or alley, as the case may be, the connection is made of lead, tapping the main a little high, and the galvanized service pipe is so graded that any settlement will not bring is unusually low or break the connection. Lead being more pliable will stand a moderate amount of tension without breakage. At the curb a shut-off is placed for convenience in shutting off the water for any purpose. The ordinance usually provides that none but a licensed plumber or city employee may turn the water on or off at this point, and then only under proper regulations. As soon as the pipe enters the basement through the wall and before any connection is taken off, the water meter is installed with a plain stop on the house side and a check and waste on the street side. This fixture determines the amount of water used and should be set well above the floor and the waste so plaecd that a pail may be placed beneath to catch the water draining from the house system. Oftentimes the plumber sets this below the floor in a hole that is always damp and unsanitary, but it should not be allowed.

From the meter the pipe is carried to supply all the fixtures with both hot and cold water, except the water closet, which receives cold water only. A galvanized iron tank usually containing not less than forty gallons is used for hot water storage, tested to 200 pounds. The water is heated by coils in the kitchen range, a tank heater or a coil in the firepot of heating boiler or furnace. A gas heater is often used for this purpose and is attached directly to the hot water tank The closer the heating coil is to the tank in either of these methods, the more satisfactory it will be. If desired, a tank may be supplied with all these sources of hot water supply.

A tank heater is useful in the laundry for ironing, or the gas heater can be used when no other heat is desired in the house. The presence of a 40-gallon tank in a small kitchen is enough to heat it without other provision for this purpose, and when there is an excess of hot water as in winter time with heating plant connection a pipe coil for radiation at some distant point may be supplied from the hot water tank.





If the hot water service pipe is taken off from the top of the tank the fixtures will be more readily supplied after the fire is started.

There should be a faucet near the tank for drainage, or at a point where it will be most effective, depending upon the location of tank and heating source. By the use of a circulation or return pipe. there will be less cold water in the pipe and consequently less waste of water. Air chambers are provided to prevent hammering in the pipes. They are commonly made by carrying the pipe from 15 to 20 inches above the cock or valve and this added length the air is compressed, making an elastic cushion which takes up the force of the blow. If there is a very heavy pressure the air may be gradually forced out of chamber, being carried out with the water, and the chamber fail to accomplish its purpose. Pipes should be as direct and simple as possible to avoid friction and unnecessary noise. Care should be taken to avoid cold exposures of the house, keeping the pipes to the center as much as possible.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 344 G. M. KAUFFMAN, Cleveland, Ohio.
B 345 KEITH & WHITEHOUSE, Spokane, Wash.
B 346 CHAS. S. SEDGWICK, Minneapolis, Minn.
Design No.
B 347 JOHN HENRY NEWSON, Cleveland, Ohio.
B 348 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 349 BUNGALOWCRAFT CO., Los Angeles, Cal.
B 350 ARTHUR C. CLAUSEN, Minneapolis, Minn.

Design B 344.

OUR opening design this month is a cottage of a rather popular and inexpensive type. The low, sweeping roof—supported with massive white pillars—makes an exterior which is both harmonious and pleasing. The wide, projecting eaves give a feeling of protection, and the eye rests on this construction with a sense of confidence.

Either the large 24-inch shingle or wide clap-boards will make a suitable covering for the exterior wall; and red slate, shingle tile or dipped cedar shingles for the roof.

The color scheme of the house can be varied; but the one suggested is a rich brown with the heavy white columns, the trim, doors and windows to match.

The chimney and foundation should either be rugged stone or rough, variegated brick, with steps to match so as to carry out the strong rustic effect and make the house really picturesque.

The porch, though nine feet wide, is so arranged as not to darken the room, there being uncovered windows on both sides. The pergola may be either covered or left open, as may be desired.

The living room has a large, open fireplace on one side which invites one to warmth and good cheer, and an attractive, open staircase on the other side.

There is a wide opening between the living room and the dining room; also a sun porch adjoining dining room, connected to the latter with French doors. This sun porch is also connected with the pantry by double acting door, so that it can be used for garden, dining, or breakfast rooms if desired.

The kitchen has ample pantry space and the back stairs ascend from it to landing of main stairs.

There are four chambers, a sleeping porch and a bath room on the second floor. Each room has good sized closet and there is a linen closet in the hall. The basement has laundry, cold room, coal bins and servants' toilet.

The principal rooms of first floor and hall of second floor are stained, waxed and polished. There are finished hardwood floors throughout.

The chambers and bath room are painted white and finished with Ivory Enamel.

As a whole, the house is planned to give the housewife an excellent opportunity for an artistic decoration which will reflect her own individuality.

The dimensions of the building, exclusive of veranda and pergola, are 26x35 feet. It contains about 22,500 cubic feet. The minimum cost, complete, is about Thirty-three Hundred ($3,300) Dollars; the maximum, about Four Thousand ($4,000) Dollars.

Design B 345.

The "H" type of cottage is shown in this summer camp, rustic stone work being its most characteristic detail. The fireplace has an opening four feet six

inches wide, with cobble stone hearth and concrete shelf and the rough stone work of the facings and chimney is exposed to the roof.

No foundation is provided, the floor joists being supported at frequent intervals by large rocks. The exterior walls are of rough boards placed vertically and the joints covered with battens. Tree trunks are used to support the porch roof and are an effective detail.

The plan provides four bedrooms, excellent closet space, bathroom and kitchen besides the twenty-four foot living room.

The greatest simplicity consistent with comfort has been the ideal set before the designers and the result is most satisfactory. The architect estimates the cost at $1,500.

Design B 346.

This attractive colonial home bears a low Dutch appearance with broad frontage and low spreading gambril roof. The size of the house is 36 feet frontage by 23 feet depth, with a Piazza at the left 10 feet wide, adding to the breadth of the front facade. There is much that is homelike in the appearance of this house and the plan of the interior is simple, convenient and livable. The entrance portico is in the center of the broad front entering a central hall with stairs fronting, leading to the second story and section of steps from the kitchen up to the main landing. The dining room at the right of the hall on the main front with wide projected Dutch window with seat. Kitchen at the rear and connected through the pantry with the dining room. The large living room on the left is 14 by 22 feet, with broad central fireplace and opening with two pairs of French windows onto the Piazza.

The first story is 8 feet 6 inches high, and the second story 8 feet. There is a good finished basement under the entire house.

The second floor has four good chambers and sewing room, large bath room and ample closets. The finish of this floor is designed to be in white enamel with birch floor, and the finish of the first story in Washington fir with dark Mission stain.

The outside of the house is designed to be shingled, and stained brown with all of the trimmings, casings, cornices, etc., white, the shingles of the roof stained brown.

The estimated cost of this house exclusive of heating and plumbing is $4,200. This house is well adapted to a wide lot and will make a beautiful commodious country home. The adding of Spanish tile to the roof and cement to the exterior walls would make a very fine home and an increased cost of $1,000.

Design B 347.

A bugalow erected on the shores of a lake, near a large city, and is of frame construction extending very close to the ground. The siding is rough-sawn lapsiding, and the roof is shingled and stained a very dark brown. The window sash are painted white. The grouping of windows is the sole ornamentation, and all windows are casements with glass set in leaded lines. The house being situated between the avenue and lake, has the entrance from the avenue side and a veranda looking over the lake. The living room and dining room are separated by high cabinets forming bookcases, while the ceiling line is unbroken through both of these rooms. The kitchen is so isolated as to prevent odors permeating the house and the servant's room is handy to the kitchen. This room is made accessible from the main hall so that it may be used as one of the main bedrooms or as a den overlooking the avenue.

The sleeping quarters of the house are carried out according to the same principle of isolation as all my bungalow plans. The attic contains one finished



—Geo. M. Kauffman, Architect.

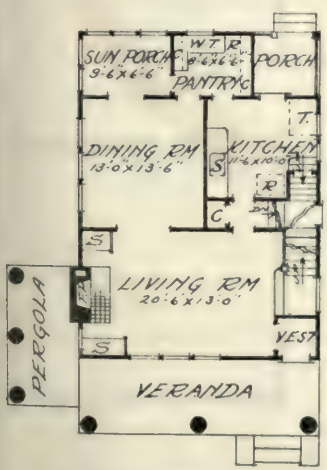
DESIGN B 344

Cottage of the Semi-Bungalow Type

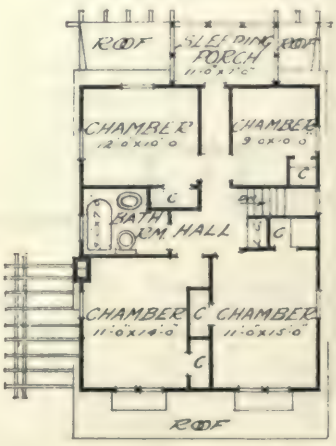
bedroom and a large finished storage space, lighted by windows at each gable end. Basement under the entire building contains laundry, steam heating plant, coal and cold storage room. Estimate of cost, $5,000.

Design B 348.

This sided bungalow is simplicity itself and with its setting of beautiful flowers and shrubbery, is a picture to be remembered. The living-room is centrally located and contains a fireplace. The dining-room is at the left and is served from the kitchen located from behind the living-room. The two chambers are upon a private hall with bathroom and linen closet, making a very desirable arrangement. The basement and location of the



FIRST FLOOR PLAN



SECOND FLOOR PLAN

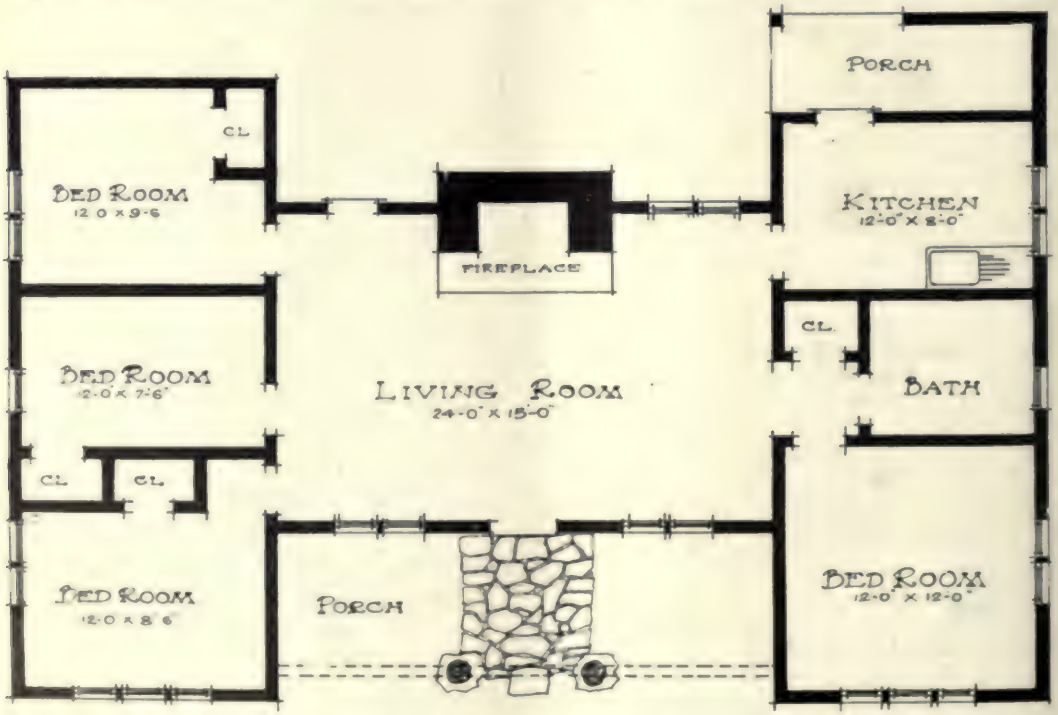


—Keith & Whitehouse, Architects.

DESIGN B 345

A Western Summer Camp

kitchen fixtures are especially desirable for service. Ice box is located in the entry from which the basement stairs descend with a maid's room adjacent, containing clothes closet. The partial basement is 7 feet high and contains a small



• FIRST FLOOR PLAN •

Keith & Whitehouse Architects



—Chas. S. Sedgwick, Architect.

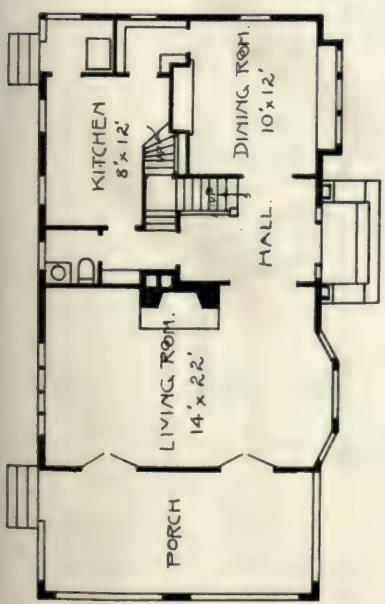
DESIGN B 346

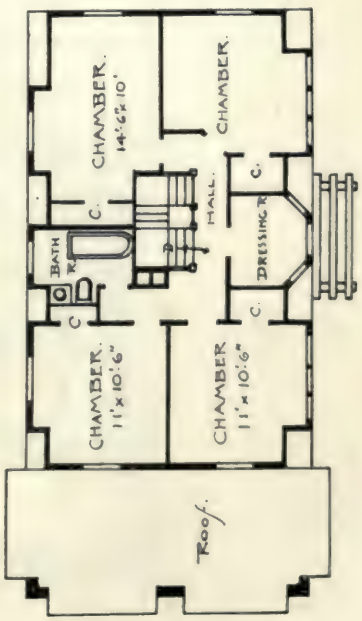
Colonial Architecture with Gambrel Roof

furnace. The finish and floors are of Georgia pine white enameled. Story 9 feet high. Attic for ventilation only.

The size upon the ground is 40 feet wide by 27 feet deep exclusive of porch.

For a small family desiring to keep a maid, this bungalow is especially attractive. With furnace and plumbing, it is estimated to cost $2,500.







—John Henry Newson, Architect.

DESIGN B 347

An Interesting Type of Summer Cottage

Design B 349.

Unusual interest has been shown the past year in California bungalows and in this design we illustrate one of the most attractive in Los Angeles. Its lines are perfectly drawn and its beauty is due to its exact symmetry. It is not an overly large house, being 30 feet by 48 feet, thereby being quite suitable to any lot 40 feet front or wider.

The construction is well shown by the illustration. The front porch work and



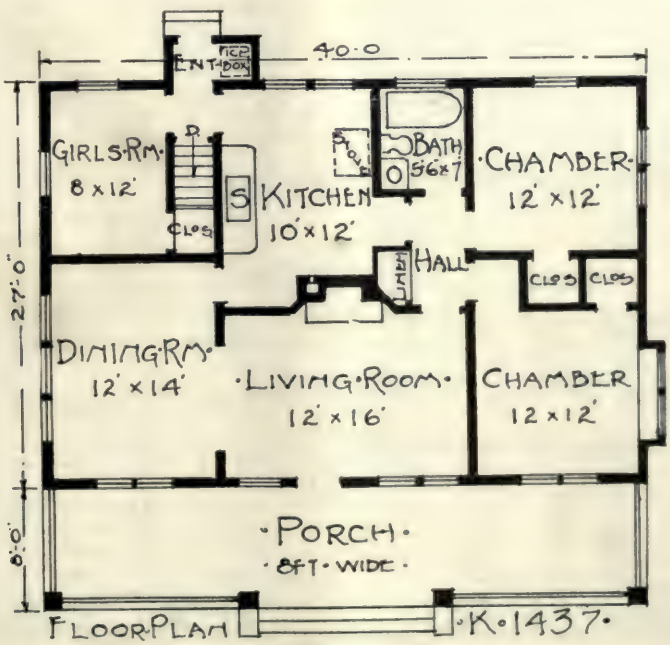


DESIGN B 348

An Inexpensive Mountain Bungalow

chimney are of stone with cement coping and caps. If stone is not convenient this work can be built of brick with good effect. The outside walls are weather-boarded with shingled gables and roof. The interior is well arranged. The music room is separated from the living room by folding doors and can be used for a bedroom if required. All of the rooms are of good size with excellent light and ventilation. The kitchen is fitted up in full cabinet style. There are two large closets and a linen closet; bookcases built in under the windows on either side of the fireplace in the living room; a handsome buffet, etc. The inside finish throughout is of Oregon pine, stained.

This house has been built in Los An-





—The Bungalowcraft Co., Architects.

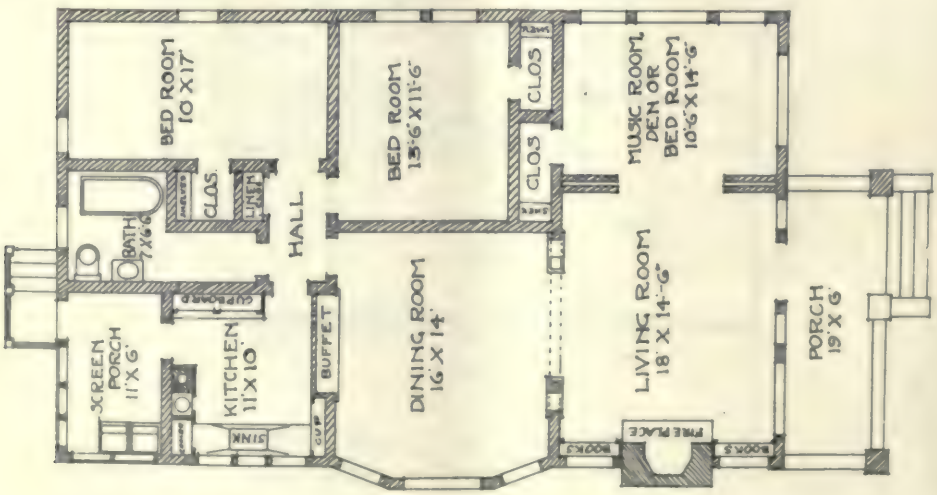
DESIGN B 349

A Typical Los Angeles Bungalow

geles with the light construction which is sufficient for that climate, for $2,000. In a colder climate with cellar and furnace and with the side walls sheathed and papered and other details of construction necessary for warmth, the cost might run up to about $3,000.

Design B 350.

In Architect Clausen's sketch this month we have in contrast to the preced-



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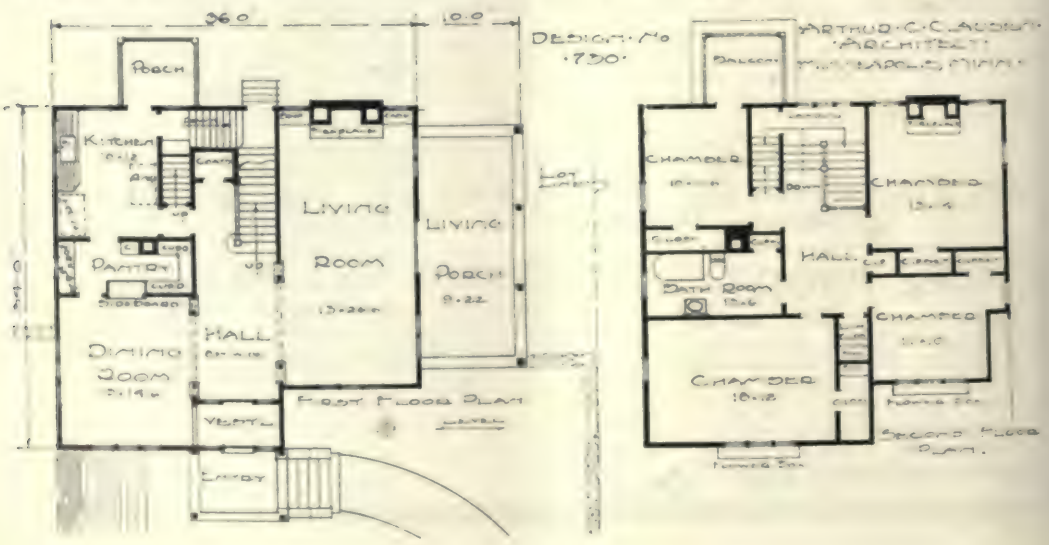
—Arthur C. Clausen, Architect.

DESIGN B 350

Stucco Exterior with Paneled Gables

ing designs, a very well balanced English half timber house. The dividing stripes used in the gables are thin or what are termed "half" timbers. The body of the house is cement finished rough cast. Upper sash of windows are leaded glass.

A large living porch is built off of the living room reached by French windows. Two brick fireplaces are provided, built in book cases and hardwood finish and floors. Estimated cost without heating and plumbing is placed at about $5,000.





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Oak Flooring, 100 lineal feet, 52c



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Planning Ahead.

MANY houses are built, so to speak, in the abstract. Considered merely as houses, they are charming, well proportioned, dignified or picturesque, well lighted, harmonizing with their surroundings. But living in one of them is another story. The rooms have too much wall space or not enough. Or they blaze with light, but the arrangement of the windows prohibits the placing of a desk or an easy chair so that the light comes from the left. Bedrooms on the warm side of the house are so constructed that they receive no direct current of air. Doors open against beds, or the only place in a room large enough for a bureau is so lighted that it is impossible to get a truthful impression of one's appearance.

The trouble is that people do not think ahead. If you have satisfactory furniture you ought to make your house a setting for it, to plan your rooms so that it may be placed to the best advantage. If the furniture is heavy and of dark wood you must be sure that your rooms have plenty of light, so that you can use wall papers of a sort that will be a good background. A light colored paper is almost never a good background. You do not want to be restricted in all your purchases by the need of conserving every ray of light.

The Placing of Electric Lights.

The best modern lighting is from the sides of the room. It is well to install a central light for occasional use, but side lighting is the best for all around use. But beware of that placing of lights that bisects the wall spaces, placing a cluster of lights in the center of each. That means that you can never hang pictures properly, for any good arrangement of pictures demands an emphasis of the central point of the space in which they are hung, either with a larger picture, or with some other important object. A cluster of electric lights is not an important object.

The Room Lined With Bookcases.

If it is planned to run bookcases all around the walls of a room, it must be remembered that, unless the room is unusually high, the popular drop ceiling will break up the wall too much. Even if the room is not to be decorated immediately, the ceiling line should be defined with rather a heavy moulding. For the room of average altitude, five feet is about as high as the shelves can be, with good effect, if pictures are to be hung above them. If the number of books to be accommodated demands higher shelves, it is best to carry them up to a couple of feet of the ceiling line, placing a few large pieces of bric-a-brac, casts, or the like upon them at intervals.

The Treatment of Casement Windows.

Badly planned casement windows are so trying, so very difficult to live with that it is best not to commit one's self to them without due consideration. The difficulties of the simple casement window are multiplied when it is in several sections. The writer has lately seen a house built by an architect of great reputation, with casement windows in three sections, the opening so arranged that it is an absolute impossibility to wash the outside of two of the sections.

The best form of casement window is a single one, opening in the center and opening out. The inward opening casement is apt to leak and interfere with



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the curtains. On the other hand, it is more easily screened, as a screen can be fitted to the entire length of the outer window casing.

The best treatment for a casement window is some sort of thin curtain, gathered top and bottom on a rod and fitted to each section. For small windows the ordinary Holland shade is hardly practicable, but it is quite possible for the large and long windows sometimes found in first floor rooms opening onto a piazza. With the thin pane curtains, long curtains, hanging to the floor, of a heavier material, and entirely outside the window frame, look well. Then the necessary wire screen can be set within the frame. But effective as the casement is, the added expense of screening the entire length of the window, and of providing awnings, if the exposure is a sunny one, is worth considering before deciding upon it.

An Effective Color Combination.

If you are on the alert you may often discover in some paper or textile, whose price renders it utterly prohibitive, a sugguestion for a color scheme to be worked out in much simpler materials. For instance, I saw some time ago a most expensive imported paper, at the modest price of $5.00 a roll. As a matter of fact the design was so strongly accentuated that it would have been extremely trying to live with, but the coloring was exquisite, a combination of burnt orange, pale bronze, gray blue and ivory. Now you find just those bronze greens and burnt oranges in some of the French tapestries, cotton every thread of them, but fading very little, and so delightfully that every year improves them. I had a vision of a room with a cool blue gray wall, with ivory white woodwork, with chairs and sofas covered with tapestry, with a rug of a blue darker but not brighter than the wall, with curtains of filet net in squares with effective heraldic designs, with one good piece of ivory tinted plaster, a pair of blue and yellow Ginori candlesticks and a dull green pot with golden brown wallflowers in it. Only I would improve on the original and add a touch of black in the shape of a chair and table in brilliant black.

Applied to a Rag Rug.

Slightly modified, that same combination is a capital one for a rag rug. Do you realize that it pays to have your rag rugs made to order? In the New York shops they charge $7.00 for a rag rug of distinction, two yards long and one yard wide. Such rugs are generally woven with a white linen warp, always with a heavier warp thread than the ordinary rag carpet. And for a rug woven with a white warp you must have your colors stronger than for a colored warp. It is as if you saw your colors through net or tarlatan.

To carry out your color scheme the bulk of your rags should be in burnt orange tones, but rather dark, almost a golden brown. Or you might use a brown warp and then the ground color would be a deep ivory. Have the rug woven with about six inches of the plain color, orange or ivory, with just a dash here and there of the green or the blue. Then three inches in which all four mix. Then six inches more of the ground, and so on till the rug is long enough. If you have a fancy for borders, a four-inch strip of plain blue gray or bronze at either end is not amiss, but the best of the rag rugs are woven continuously like a carpet. It is desirable to get new material and to dye it, which is easily done with the package dyes. About four yards of sheeting will be needed for a rug two yards long, torn into inch wide strips.

Another good combination is tan color, light green, light and dark blue, and old rose, the tan color being used for the body color.

What are called Madagascar rugs are made from strips of burlap, red, blue, or green, woven with a warp of heavy cord, almost rope, and are very substantial indeed. Sometimes they are varied by stripes in which the cord is used for woof as well as warp.

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TO the subscribers of Keith's Magazine is offered the service of our **Expert Decoration Department** in planning a decorative scheme for any room in your home or for several rooms. This service should prove very valuable to you, especially where strictly up-to-date decorators are not accessible in your home town. We make this a free service as one of the advantages open to the subscribers of **KEITH'S MAGAZINE,** the recognized authority on Building and Decorating Artistic Homes. Subscription, Two Dollars a year.

ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

J. P. G.—"Will you please advise me in regard to the enclosed bungalow design? House faces west with a 60-foot yard. Has vacant lot on one side. It is in a small town. Inside finish is all in yellow pine. I have an old-fashioned walnut bedroom set; also some odd pieces of mahogany and mission oak. Would like the living room and dining room in mission style. What would you suggest for curtains, rugs, walls and woodwork in these two rooms? I thought of having the dining room blue and white, the living hall gray and green, and the bedroom yellow, tan and brown. What do you think of this color scheme? Would a walnut wardrobe be permissible to use in a bedroom with a quartered oak bedroom set? What kind of mantle must I use in bedroom, as it is not to be in mission style? I have some cream curtains stenciled in brown that I thought of using in this room and making dresser and mantel scarfs to match. What color would be pretty to paint the exterior? We want white for trimming. Would you advise using black for window sash?"

Ans.—It will be best to use a brown stain on the pine woodwork in living hall and dining room, if they are to be finished in mission style. If the mahogany pieces are very plain and dark, they will not conflict with this. We should by all means put the old fashioned black walnut set in the down stairs bedroom and use the walnut wardrobe there. The woodwork should be painted ivory white and the mantle of fireplace the same. Then use ruffled muslin curtains with over draperies of flowered chintz, with the same chintz for bureau cover, chair covers, etc. We should not use browns and yellows in this room, which has a southwest facing, but a wall paper of light blue chambray. The black walnut furniture will look well in this setting, but dingy and commonplace with browns.

Instead of gray in the northwest living hall, make your wall a soft ecru or pale tan, then use green furnishings if you wish, the brown would be better. The blue and white dining room will be all right. The blue and white Jap. crepes described in Nov. KEITH'S would be good here for curtains. Put your cream curtains stenciled in brown in living hall. The stairway should have a stair carpet matching the rug.

A cigar brown is good with a white trim for exterior and we would paint window sash white also.

J. T. F.—"I wish to avail myself of the kind offer in your magazine and ask for suggestions as to decoration of my new house.

"The hall is finished in oak, wainscoted 4 foot in panel and has hardwood (oak) floor and oak staircase. The dining room paneled in strips two feet apart to plate rail, six feet from floor (oak floor). The living room paneled five feet in oak with fire place and oak mantel in end (oak floor). Den paneled in four-foot oak (oak floor). All these rooms in beamed ceilings.

"I desire to use stained walls of some kind instead of paper. Please suggest colors for the different rooms."

Ans.—As a matter of fact, mahogany stains are used upon oak, but not generally and to our mind not successfully. The mahogany finish is more adapted to mahogany or to birch. Since your living room furniture is mahogany, it would have been much better to have put the wood trim of that room in either mahogany or birch. This would not at all have conflicted with using oak on the balance of the floor. The five-foot wainscot of the room makes any want of harmony

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between woodwork and furniture even more pronounced.

However, if your furniture has a dull, antique finish, it will not jar disagreeably with the oak, but it will not be in accord with it. Were the room a parlor for more formal uses, we should use the silver gray stains, as that would contrast beautifully with the mahogany, but such a finish would not be suitable for a living room, nor for the five-foot wainscot and beamed ceiling. Under the circumstances we think the best choice would be the dark mahogany stain on the oak, for this room. Something, however, would depend on the character of the fireplace facings, and these you do not state.

The silver gray stain would, however, be very delightful in the den, as this room is small and quite detached from the other rooms. As it has a north outlook, the wall above the paneling could be tinted in this soft Pompeian red, with rug and furnishings to match, a unique treatment of much warmth and beauty. The ceiling should be a light but warm gray. Should you prefer the brown stain, then the wall should be a golden tan, with browns and creams in furnishing.

The dining room and hall, we should use a fumed brown stain. The dining room would be very lovely, if the part between the wood strips were filled in with a rich green burlap, and a decorative paper in blended green with touches of orange and curtains of this orange silk or near silk and the ceiling tinted pale dull yellow. Such a treatment would be infinitely handsomer than if the wall was "stained" or painted. Also the lower wall or wainscot needs the protection of the burlap, as the unprotected plaster will be sure to chip, scratch and mar. It would not be so very expensive, as you can get the burlap 72 inches wide—the length of your panels—and by counting the panels, estimate the number of feet or yards you would need. This width comes at $1.50 a yard.

We would strongly advise an exception at least of this room, in the tinted or painted walls. As to "staining" inside plaster, we do not know of any satisfactory process. It must either be tinted or the flat tone paint used.

The woodwork of the upper floor would be preferably white, though it need not be enamel. The servant's bedroom might be natural finish, if preferred. The bath must, of course, be white, and the kitchen —to be up to date.

I. C. W.—"We are finishing up our bungalow and would like to ask your advise about the finish of the living and dining rooms. The entrance from the porch is direct into the living room, which is 15x24, with fire place opposite door, with brown brick mantel. Sliding doors connect this room with dining room, which is 16x16; and is wainscoted one-third way to ceiling. The floor and finish of this room is gum, some of which is nice red, and the floor and inside trim of living room is oak. The furniture in both rooms is mission. The ceilings and walls are plaster, sand finished, to be tinted. What colors would you tint the ceiling and walls and what treatment would you give the woodwork? Would you finish both rooms alike? The dining room mantel is a mission design. The front faces the northwest, and these two rooms are across the entire front—the stairway in living room. Also give some suggestion how these rooms should be curtained."

Ans.—Inasmuch as your main rooms have a northwest exposure, with mission style furniture and mantel, and brown brick facings, a brown satin would be the most harmonious finish for the woodwork of both rooms.

The same stain would give somewhat different results on the different woods, but this variation of tone would not be objectionable. Gum wood is very pleasing with a brown satin.

The living room wall would be harmonious if tinted a soft ecru with ceiling a shade or two lighter. The dining room wall above the wainscot would have a warmer tone of dull yellow, with paler tone on ceiling. With this yellowish wall, a blue and yellow run on the floor and curtains of blue and yellow Japanese crepe would be cheerful, especially if there were blue plates to go against the wall.

In the November Keith's there are many curtain suggestions. The filet lace net shown there would be a good choice for the living room. Sheer deep cream scrim, with a finishing edge set on a two-inch hem turned back, is also good with brown woodwork and mission furniture

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Compensations.

THE servant problem is universal, or nearly so, and no signs of its solution appear. The situation is bad in the East, it would seem, from all accounts to be much worse in the Middle West. True, the immigration from Europe is enormous, but of the women entering our ports a large proportion are Jewesses, who are out of the question for domestic service; many others are Italians, also out of the market as servants; while still others are Russians, Hungarians and Bohemians, so uncouth and untrained that help from them is almost worse than none. Eliminate these nationalities and you have remaining the extremely high-priced and exacting Scandinavian, for whom the demand is many times the supply; a very few Germans, still fewer French women and some Irish women. It is quite evident that the outlook for the housewife of moderate means is a poor one.

Another condition than that of supply complicates the situation. The rich and the well-to-do, who must and will have service at any price, have raised the standard of wages for trained servants to a point quite beyond the reach of the average income. So that for the greater part of the middle class, to use a term which seems to contradict all our theories of equality, nothing remains but to adapt themselves to irrevocable conditions and to serve themselves, with such occasional amelioration in the way of temporary help as circumstances will permit.

It may seem ungracious to remind the woman who is struggling to keep a family comfortable, under a continual burden of strained muscles and exhausted nerves, that there are compensations in not having a queen regnant in the kitchen, but so it is, and women are not lacking who, having tried both ways, prefer to be their own domestics.

What are the possible compensations of doing your own work? First there is the very tangible one of the saving in money. The very lowest price for which one can get a reasonably competent general servant is twenty dollars a month. With the present price of food supplies of all sorts, her board can hardly be reckoned at less than four dollars a week. That means four hundred and forty-eight dollars a year added to the family budget. In many cases, perhaps in most, a dollar a week additional is not too much to allow for the waste and breakage of the lady in the kitchen, which brings the total to five hundred dollars a year.

Then there is the possibility of keeping house according to your own standards, rather than those of your servant. The country is full of women who are spending a great deal more money on food than they need or desire because they go in fear of the criticism of the maid who compares their way of living with that of a former mistress. Moreover the presence of the maid imposes an absolute regularity in the meals. No matter what the emergency you must have dinner at the appointed hour, although high tea would be more agreeable. You must have a regular lunch, when you are alone in the house, because by contenting yourself with a tray sent upstairs you are establishing a precedent, and she will be unwilling to get a reg-

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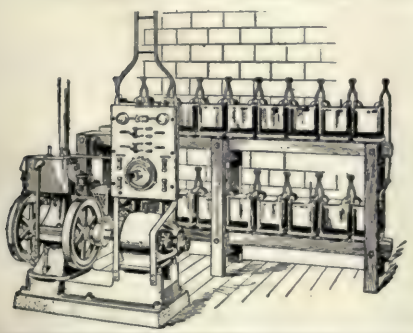
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ular meal when you have guests. Then, too, she has her ideas of the proprieties of things. Woe betide you if you want baked rather than boiled potatoes, or if you think corned beef a possibility without cabbage. She is apt to disapprove horribly of fruit for dessert, and she looks askance at anything unusual.

But her scorn for irregularity is as nothing compared to her contempt for economy. The word is not in her vocabulary, or else it is synonymous with stinginess, and it takes a tremendous endowment of philosophy to endure being branded as mean when you are merely prudent. You may have all the most approved methods of expenditure at your fingers' ends, you may be a past mistress of the art of using up left-overs, you may be expert in balancing nutritive elements, but when you enter your kitchen you find yourself grovelling before her histories of the lavish expenditure in her last place. It is but just of average continental servants, of whom there are far too few to be had, that having been accustomed all their lives to living on a very close margin, they respect an economical mistress, and are most of them careful managers on their own initiative. But in this they differ widely from the Irish and Scandinavians.

Other advantages pertaining to the servantless household will suggest themselves to the reflective mind, such as the fact that children will acquire their standards of speech and manners from their equals, instead of from those of a lower grade of intelligence and culture, the relief from perpetual anxiety about the safety of property intrusted to people who have no interest in its preservation, or may make use of the confidence placed in them to let suspicious characters into the house, or the friction arising from forced association with persons of limited understanding and coarse instincts.

The Temporary Helper.

Of course the number of families who can get on absolutely without outside help is comparatively small. With some assistance from the public laundry, or the private laundress, the family of two can be very comfortable, but add even a single child and emergencies are constantly arising where outside help must be employed.

If only some of the executive ability which has gone to the organization of the endless Women's Exchanges, which cater to the taste for luxuries, might have been applied to devising a system by which various sorts of skilled service might be supplied, for limited times and at moderate rates of payment, countless numbers of women would have been benefited. Moreover such a system would bring into the labor market working women of the better class, with families of their own and some experience in practical management, who might leave their homes for two or three hours, but not for a day, or even a half day. Such partial employment would be of great assistance to many poor households, and would meet the needs of many women able to do their own work with occasional assistance for short periods.

Practical Co-operation.

While the woman who does her own work is waiting for a milennium of cheap service, or something else equally impossible, she might consider the advantages of co-operating with her nearest neighbors in the acquisition of some of the labor-saving appliances. Why should not a group of friends pool their resources and purchase a washing machine, a vacuum cleaner, a bread mixer, possibly a mangle, to be used by each family in turn? Such co-operation ought to at once be possible and advantageous.

And in the purchase of supplies, why do not similar groups unite to purchase staple groceries in such large quantities as to effect a substantial saving? Why not divide a barrel of potatoes and a barrel of apples with your next door neighbor, buying both in the early autumn, instead of getting small quantities and paying high retail prices? Or lay in the winter's supply of butter at summer prices? Of course in small places there are often urgent reasons for buying of the local tradespeople, as well as advantages which can hardly be estimated in dollars and cents, but when these are eliminated there is a vast number of people who might emancipate themselves from the tyranny of the middleman.

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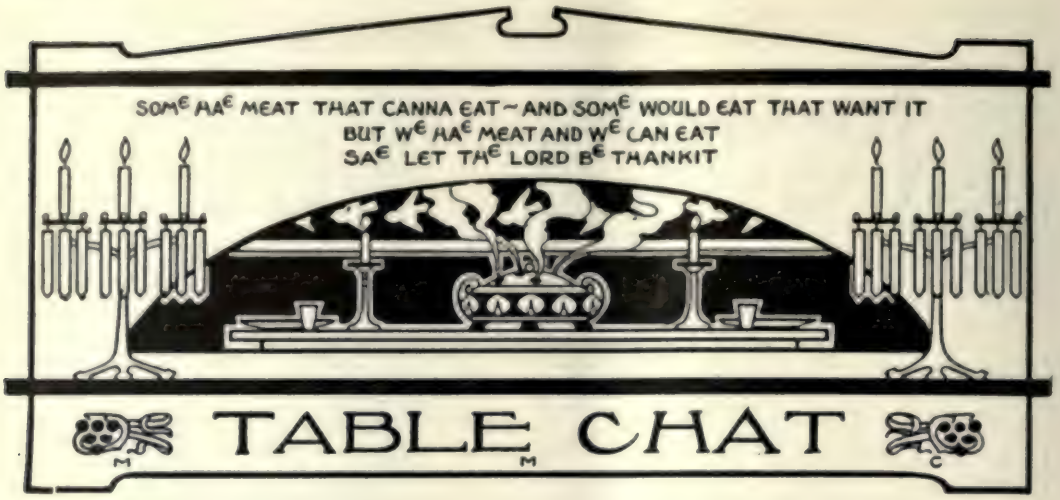


The Old Hickory Chair Co.

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Simplified Cooking for Summer

By Beatrice D'Emo



JUNKET AND STRAWBERRIES.

WITH the uncertainty that now exists as to the securing of efficient kitchen help, which lasts for any length of time, and the dread of spending much of one's time in close association with a hot range when the weather is attending to the heating itself, it is not surprising that often the housekeeper wishes it were possible to feed her family with capsules or concentrated food tablets. Even in the bungalow, or tent, one must eat to live, in fact, thanks to the appetite engendered by a bountiful supply of fresh air and outdoor exercise, one is more ready for one's meals in summer than at any other time, therefore, the home cook cannot escape her duties, and the best thing for her to do is to plan how she can perform them with as little personal discomfort as may be.

The fireless cooker is certainly a blessing for just such purpose, and it has been so perfected that it now roasts and bakes in most satisfactory fashion, as well as boils and stews, but as a cook book always accompanies the manufactured arti-

The Home of Wholesome Food

A Snow-White Solid Porcelain Compartment



A Germless Food Compartment

It does away with cracks, joints, crevices, corners and other natural hiding places for dirt, odors, decaying food and dangerous microbes found in other refrigerators—the one *really sanitary* food compartment.

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It tells you how to keep your food sweet and wholesome—how to cut down ice bills—what to seek and what to avoid in buying *any* refrigerator. It is packed with money-saving hints, and every housewife and home owner should have one. It tells all about the "MONROE"—describes its wonderful lining and the many other grand features that have given this refrigerator its position as the world's best.



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cle it is hardly worth while to devote space to recipes here.

Next to the fireless cooker, the housekeeper will find the steam cooker a good friend. By its kindly aid she can get a hearty meal over a single burner oil, gas or alcohol stove. The water is placed only in the kettle which comes next to the flame, pipes with vents carrying the steam to the other kettles, and one article in process of cooking will not flavor another. Chicken, rice and onions may be cooked for a meal, or the boiled dinner of corned beef, spring cabbage, carrots, turnips and potatoes can be cooked and served so daintily that it will appeal to the most fastidious appetite. Or, if corned beef is not relished, spiced round of beef will provide dinner for one day, and the supper or dinner dish for the next, or plain boiled beef with horseradish sauce, with green corn and a salad, will please the hungriest member of the family. For fish, the steam cooker is excellent.

Chicken potpie cooked in the steamer is a delicious dish, and after the ingredients are put together will take care of itself until ready to serve. With the addition of a cool salad and a fruit dessert it makes a satisfying dinner. It can be prepared in the morning while the day is yet cool and be reheated for dinner, or can be allowed to cook slowly over a low flame until serving time. For it have a pair of chickens—small fowls will have more flavor—cut up in joints; each will make eleven pieces, counting the neck as one. Wash with salted water, then rub with pepper. Make a dough as for tea biscuits, roll it out thin and cut in squares. Line with some of these an earthenware dish which will fit in the lower kettle, buttering the dish before putting in the squares. Put in a layer of the chicken, then a layer of cooked ham or tongue, then more chicken and some squares of the dough and two medium sized potatoes peeled and cut in thick slices. Pour in a quart of boiling water and lay on a cover of the dough, leaving a hole in the center. Steam for two hours—three will not hurt it. About half an hour before serving mix smoothly a tablespoonful of flour with one of butter and slip the paste through the hole in the crust to thicken the gravy, then continue steaming for the rest of the time. Serve in the dish in which it is cooked, wrapping a clean napkin about it before bringing it to the table.

When the household feels a craving for a roast, the cook can satisfy it and spare herself at the same time, if she has on hand a self-basting baking pan, consisting of two parts, which close the one over the other, so that the steam from the meat or fowl attends to the basting, and the cook does not have to overheat her face by opening the oven door every fifteen minutes, while she ladles the drippings over the meat or fowl. Also, let her make the whole dinner a roasted affair, by putting potatoes, peeled, around the beef and after they are partially done, say within half an hour of the meat itself being done, put in some whole, well-washed tomatoes and let them roast also, thus the flame need be kept only under the gas or oil or alcohol oven, and the dishing can be done all at once. This



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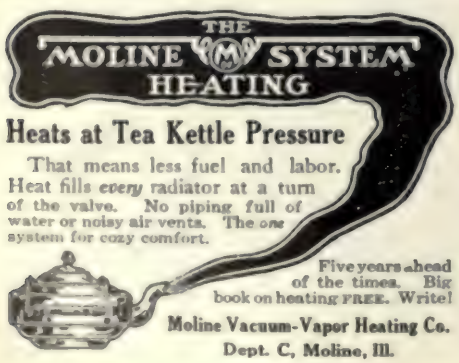
style of pan is also good for smothered chicken, which is quite as delicious as broiled or roasted chicken, yet saves the cook the trouble of standing over the fire with a gridiron for the one, and of stuffing and trussing for the other.

For the spiced beef, get for a medium sized family five pounds of the upper part of the round, and rub it well with the following mixture: a teaspoonful of salt, half a teaspoonful each of pepper, ground ginger, mace and cinnamon and a full teaspoonful of ground cloves. Leave the spice on and let stand over night in the refrigerator. Next day remove the bone and fill the hollow with a stuffing of bread crumbs seasoned with summer savory, pepper and salt, one onion minced fine, and sufficient butter drippings to moisten. Skewer the ends of the beef together and tie tapes around it to keep the shape. Put in the baking pan, dredge with flour, pour in two cupfuls of boiling water, then cover with the other pan and roast slowly for three hours, or put in the steam cooker—the lowest kettle, or rather the one just above that which contains the water—and steam for the same length of time. The gravy may be thickened if the flour dredged on the beef is not sufficient. Eat hot for dinner and slice cold for tea.

Any one of the dishes mentioned may be prepared the day or so before being wanted, and will amply provide the solid part of the main meal, while for breakfast one hot dish such as can be prepared in the casserole over the chafing lamp, if it be aided by plenty of fresh fruit, good bread and butter, coffee, cocoa or tea, will be sufficient for the average appetite. For tea, if a mid-dinner meal be the custom, or for luncheon, if the late dinner is preferred, salad always, with cold sliced meat, spiced fish, cottage cheese, scalloped cheese or omelet will find favor, if followed by a simple sweet or fruit. Green corn takes but six or eight minutes to boil, or it can be perfectly cooked in the steamer; string or lima beans with butter sauce, or spinach with hard boiled egg, or any of the wholesome and delicious vegetables to be found in abundance during the summer, should form part of the dinner, and will be enjoyed as well at luncheon, for one should take full advantage of them while they last.

Fruit supplies the housekeeper with an easy solution of the dessert question, and it can be varied by home-made fruit pies, with or without milk; also, there are several simple sweets which require only a few minutes' cooking.





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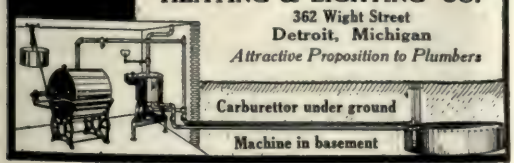
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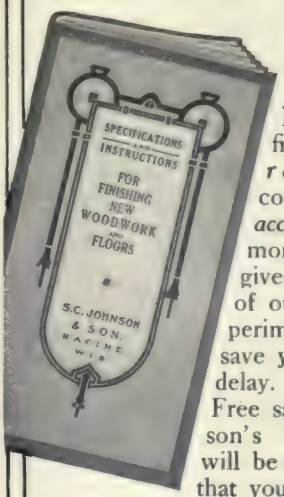
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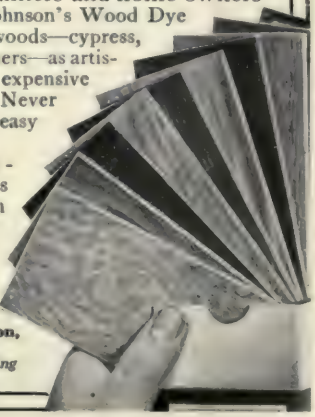
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Concrete for Fences

CONCRETE is a valuable material in the construction of walls and fences, not only for permanence but for beauty. Attention is called to the handsome illustration of concrete fence construction shown on this page through the courtesy of the Universal Portland Cement Co. This is a fence surrounding the home of F. W. Clifford, Minneapolis, Minn. The design is by Harry W. Jones, architect, and the fence was built by the National Stone Co., Minneapolis, Minn. The lower part of the fence and the pillars are of concrete block cast with a rough grained surface, laid in cement mortar with pointed joints. The upper part is cast in a special pattern and there was no attempt at surfacing after the pieces left the molds.—Concrete.



A CONCRETE FENCE IN MINNEAPOLIS.

Making Dead Air Space.

I have been told that the use of a zinc plate in the first layer of blocks above the ground in a concrete block building will prevent dampness. Can you give me some information? G., Illinois.

If the foundation above ground is built of solid concrete block, no such plate is necessary. If the foundation is of hollow block, some sort of a plate or a shut-off is advisable. The same is true of the tier of block just below the roof plate, if hollow block are used in the wall. The idea is to have a dead air space in the cores of the block which make up the wall above the foundation and below the roof plate, but it is not at all necessary to use zinc plate in order to seal up the block. Zinc is rather expensive. If you use an iron plate just large enough to cover the cores of the block, embedding this in the Portland cement mortar in which the block are laid, it should serve the purpose. Many builders who use hollow block in the walls of houses use a course of solid block at grade and just below the roof plate. This serves a similar purpose in creating a dead air space



Residence of W. T. Durrett, Audubon Park, Louisville, Ky.—roofed with Asbestos "Century" Shingles. Architect, Henry Walter.

THE finest and most durable roofing in the world is cement-asbestos shingles *when properly made and seasoned.* They are absolutely *fire-proof* and *indestructible.*

But how can you be sure they *are* properly made? You can insist on getting

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Ask for Asbestos "Century" Shingles *by name*—and see that you get them. It is worth insisting on.

Ask your responsible roofer or write us. We'll send you our booklet, "Roofing: A Practical Talk," presenting many roofing pointers of great value to property owners.

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in the wall.—Information Dept., Concrete.

Stone masons have complained in St. Paul that foundation walls of concrete are often put in without footings and are made cheaper than stone. The building inspector has asked that all such cases, when discovered, be reported to him immediately for investigation. It is something of a question as to how much of such work is done. There is some inclination to skin work in this manner, perhaps, but it is probably not widespread. On the other hand, it is a common complaint by competitors in different lines that the way that some other material can underbid their own, is by skinning the work. It is to be hoped that the request of the inspector may be followed up by reports so that a prompt investigation may be made. If such things are being done in defiance of the ordinance, they should be stopped.—Im. Bulletin.

Water Proof Asbestos.

Asbestos has long been considered a very valuable mineral product, but heretofore it has been used for various purposes on the inside of homes and buildings only, owing to its being not water proof. In Munich there have been many scientific experiments with this valuable fire proof substance and now asbestos is being artificially rendered water proof as well as fire proof, and the material is made in various marketable products as shingles, doors, electrical insulators, etc. In this country it would probably be more commonly used in the form of asbestos slate shingles. They are very easily worked, can be cut, bored and nailed exactly like our wooden shingles. They are hard and strong; will withstand frost and heat alike. They can be used as a fire proof covering for either the inside or outside of wooden walls. This material can also be worked into fire proof doors as before stated, or sheets of it can be used for lining one side of wooden doors; it can be used as a covering for walls and ceilings so as to protect them from fire and heat, dampness, disease, germs and vermin. They are being used to some extent in tropical countries where the extreme moisture prevents the use of metal or wooden roof covering.

Good Shingles.

In asbestos shingles one has a roof, when properly applied, that will outlast the lifetime of the building. The simple exposure to the elements causes the cement, that has been deposited upon the asbestos fibre in the process of manufacture, to crystallize, and it then becomes better and better, in fact, more serviceable as time rolls on. Cement has been known to crystallize as long as twenty-eight years from the time it was first mixed. This is only proof of the claims made for asbestos shingles—that they improve, toughen and harden with exposure to the elements and atmospheric conditions. Another good point which these shingles have, and it is not to be overlooked by any manner of means, is the fact that they do not have to be painted to preserve them, as the elements take better care of asbestos shingles than the best paint or dressing that has ever been manufactured.

These shingles may be punched, filed or worked generally with the greatest ease, with ordinary tools such as are used for working natural slate or wooden shingles. They become very hard, particularly if exposed to the weather, or after the lapse of years. One great and desirable feature of them is that they can be successfully jointed, fitted, etc., by the work of ordinary mechanics.

Farmers Will Have Nothing But Concrete.

Chairman Van Dorn, of the Northwestern Portland Cement association, was interviewed during a recent visit East and made the following statement concerning the use of cement in the Northwest:

"Concrete is king among the agriculturalists of the Northwestern grain states. If the farmers of the Dakotas and Minnesota continue to utilize cement and reinforced concrete at the present rate wooden buildings will soon become a rarity.

"Up in our country the farmers is doing everything with concrete. Not only does he build his house of concrete, but he insists upon the most modern concrete barns, poultry runs, granaries, fence posts, telephone poles, everything, in short, that formerly was made of wood."—Concrete Age.



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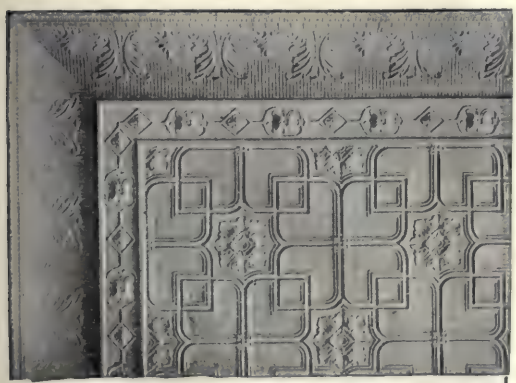
does not chip off, crack off or peel, like paint. Becomes an inseparable part of the wall, sealing the pores and filling hair-cracks. Gives an artistic, flat finish hard as flint. *Free color card* and valuable suggestions. Write today.

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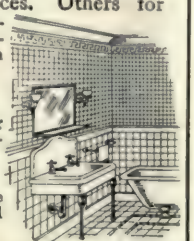
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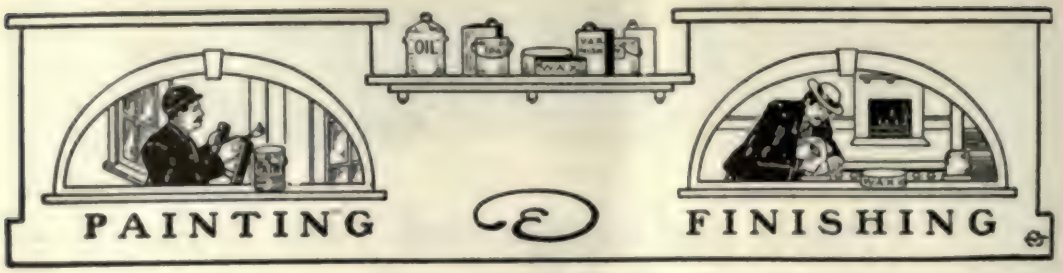
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Painting Cypress.

By E. W. Lutes, General Supt., Paint Manufacturing, Cleveland.

THIS very valuable and useful wood is probably subject to a greater range of variation in structure or condition as it comes to the painter, than any of the other woods which are commonly used in building work.

Cypress unpainted will probably survive a longer exposure to the weather than any other wood which is available for building purposes. It seems quite fair to assume that this property of endurance is due to some peculiar difference in its composition rather than to any special difference in its partciular structure.

Such observations that the writer has been able to make have led to the conviction that those elements of composition which render the wood so impervious to water and resistant to exposure of the weather, are also rather antagonistic to paints. For that reason, in painting this wood the procedure should differ materially from what would be considered good practice in painting such woods as white pine and poplar.

These statements relative to the character of cypress are meant to apply to the average product, it being conceded that in selected kiln dried lumber the special characteristics to which some stress has been given, would be much less in evidence; nevertheless, they will be present and must be reckoned with.

Generally speaking, the priming coat is the most important of all in painting, and it is in this coat where practically all of the allowance must be made for different conditions under which the painter may be working. In preparing primer for porous woods where the absorption is great, it is logical that very little pigment should be used, letting the primer consist almost entirely of raw linseed oil and some spirits turpentine to facilitate penetration. This character of primer well brushed, sinks into the wood and after becoming dry supplies a solid and enduring foundation for the succeeding coats which are to constitute the regular paint film.

Where the wood is of the general character such as is represented by cypress, i. e., much less absorbent and further inclined to be detrimental to the proper drying of paint—then the preparation of the primer must be varied to meet the different condition. As the penetration of the primer is bound to be less, it nat urally follows that much more of the priming coat will lie on top of the wood and extra care must be exercised to see that the composition and preparation of the priming coat is such that it will dry thoroughly and be well bonded to the wood. If the primer consists too largely of oil, then the drying is likely to be impeded to an extent that when the painting is finished, blistering or peeling may result.—The Colorist.

Loss of Heat by Painting Radiators.

It is generally believed that there is a great loss in efficiency from painting radiators. We do not agree with this opinion, however, says "The Locomotive," and it has long been our custom to require piping and radiators to be painted in colors appropriate to the finish of the rooms in which they are placed. Professor C. L. Norton, of Boston, Mass., made a long series of experiments upon the transmission of heat through and from painted surfaces. His results are highly interesting, and are recorded in the nineteenth volume (1898) of the Transactions of the American Society of Mechanical Engineers. They have seemingly never attracted the attention they







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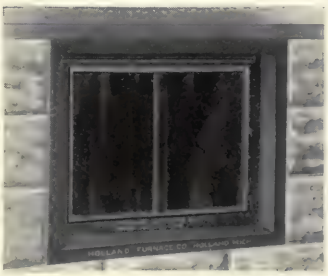
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deserve. Taking the amount of heat radiated from a new pipe as 100, Professor Norton obtains the following relative values for the heat radiated, under similar conditions, from pipe treated as indicated:

Loss of heat at 200 pounds pressure from bare pipe—

New pipe	100
Fair condition	116
Rusty and black	119
Cleaned with caustic potash, inside and out	116
Painted dull white	120
Painted glossy white	100.5
Cleaned with potash again	116
Coated with cylinder oil	116
Painted dull black	120
Painted glossy black	101

It appears from the foregoing results that the color of the pipe has little or no effect upon the radiation of heat, though the condition of the surface with respect to glossiness or dullness has quite a sensible influence. Thus a dull surface, whether it be white or black, has a radiative power of 120, and a glossy surface, whether white or black, has a corresponding power of only about 101. These results accord well with our experience, which is to the effect that there is no loss in efficiency through making pipes and radiators harmonize with the general color scheme of the rooms in which they occur, provided glossy finishes are avoided.—American Carpenter & Builder.

Suggestions for Painting Old Floors.

The following advice on painting old floors will be read with interest:

Be sure your floor is clean. If there should be paint spots on it clean it off with caustic potash, and if there are any large cracks fill them with putty. You can buy staining of all kinds and dilute it with turpentine, as it is usually too thick. If the floor is to be all walnut do it with a cloth or brush. If you want to make your stain, buy a one-pound can of burnt umber, ground in oil; mix a sufficient quantity of this with boiled linseed oil to color it without thickening the oil to notice it much. Try it on a small piece of wood till you get the color desired, and in this way you can easily determine the quantity of umber to use. It should be a rich walnut brown. Rub this thoroughly into your floor till the stain ceases to come off. If the coloring is not dark enough when dry give another coat. The floor now being stained, prepare for the next day's waxing. Mix one gallon of turpentine with one pound of beeswax shaved thin. Soak the wax all night in the turpentine before using, then rub on with a woolen cloth. When the wood finally becomes well polished apply wax occasionally. A very easy stain is made by putting burnt umber in alcohol to make it the proper consistency for easy application and apply as above, then give a thin coat of shellac, and when dry sand paper nicely, and give a good flowing coat of ordinary varnish, which will give it a splendid finish. For oak stain.—To strong lye of wood ashes add enough copperas for the required shade. Put on with a mop, and varnish when dry.

Dressing for Linoleum.

Another article that ought to sell is a ready-for-use dressing for linoleum, and maybe there is such an article on the market. It is not convenient for one to prepare it for use, unless some very simple thing is used. Here is a formula that is good: Melt on a steam bath 18 ounces of paraffine with 1 ounce of palm oil, afterwards thin with 4 ounces of kerosene oil. Rub it on with a soft wooden cloth. It makes the linoleum soft and adds to its life. Such a mixture might be put up for use by some dealer. Wax polish is good for this purpose, too, using the commercial article or mixing some beeswax with turpentine to form a butter-like paste. But this simply brightens the surface and does not soften the linoleum.

Flat Wall Finish.

Nearly all paint makers are making flat wall finish, and while much of it is being used, yet it may be said to be in an experimental stage. I hear many complaints concerning it. It surely makes a nice looking job, but as to its durability or the matter of repainting over it, I have not heard from the users. If some of this wall paint is left in the bucket it is seen that it generally becomes very hard and brittle, though apparently this is not true of all makes. A painter who has been using such finish for the past three years says he has had no opportunity

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for recoating over any of it, hence cannot say as to the matter. One man says that when he applied the flat wall finish over a priming of lead paint it softened up later and came through the flat coating. This, too, when the lead paint had been on ten days and was perfectly dry.



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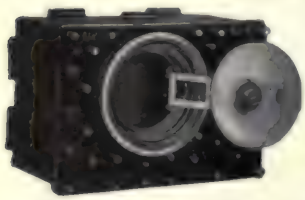
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Specifications for Electric Wiring.

A UNIVERSAL specification which can be used for all classes of electrical equipment is a subject that has long been before the architects of the United States, but has never yet been solved, says Harvey E. Bloomer, electrical inspector of the Milwaukee Board of Fire Underwriters, in a paper read before a recent meeting of the Milwaukee Architects' Club. The Western Association of Electrical Inspectors appointed a committee to prepare specifications—one which could be adopted for all classes of dwellings, one for store and office buildings, and another for factories—but when submitted to the association it was decided that although great care and considerable thought had evidently been given the matter, the specifications did not meet the requirements, and it was finally decided impossible to construct a universal specification.

Inasmuch as the Western Association, composed of men of ability in electrical engineering, have come to the above conclusion, I am inclined to believe that the most advisable method to adopt in making specifications is to state the number and location of lights; the kind and location of switches, the location of cut-outs, the place where the service is to enter, where the meter or meters are to be located, and the kind of wiring, whether knob and tube, rigid or flexible steel conduit or moulding. State that the wiring must be neat and in a workmanlike manner and in conformity with the rules of the Board of Fire Underwriters. It would also be well to add that before the first installment is paid a letter of approval must be secured by the contractor from the Board of Fire Underwriters.

Specifications are important and necessary in connection with electrical construction, yet there are numerous other very vital features which should receive close and careful attention. One is the time when the electrician is permitted to perform his work. Too often has the electrical work been installed at the same time as the plumbing and heating, and frequently with the result that the electrical installation, which was possibly first class and worthy of praise, has become extremely menacing, occasionally resulting in a fire, owing to having been disturbed and crossed with pipes and other objects. I would advise that the electrician be prevented from working until all other mechanics are through and the house ready for lathing. Then, after the equipment has been inspected, you will know positively that it has not been disturbed. I would also advise that the lathers be permitted to work only after you are assured that the equipment has been inspected and accepted. The suggestion, however, refers only to concealed knob and tube construction, as rigid steel and flexible steel conduits are not subject to the same misuse.

The underwriters' rules permit 660 watts, or twelve candlepower lamps, to a circuit which the electrician takes advantage of. Frequently after the equipment is completed it is decided when fixtures are being purchased that more lights are desired in some of the rooms than originally intended, and consequently the circuits become overloaded. To avoid this, it might be well to specify eight lamps to the circuit, as is being done in other towns, and then there will be ample capacity to add more lamps, fans, curling irons, etc. To facilitate the work of the electrician and avoid errors and disputes, it would be well to furnish him a blue print upon which the location of the fixtures and switches and various devices should be designated.

With the advance of electricity for domestic purposes, the architect finds that he has new problems to solve and an ever-increasing responsibility. It is but very

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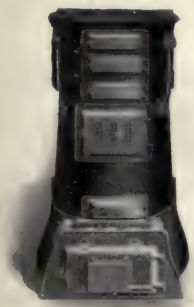
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recently that a new appliance has been introduced that is destined to become more prominently used as time advances and that is the vacuum cleaner. The installation of this apparatus, also flat-irons and all heating appliances, should receive special attention.—The Building Age.

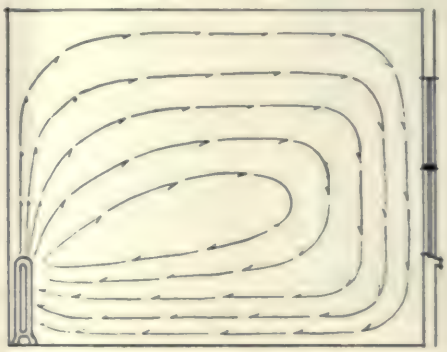
Currents of Air in Front of Windows.

In a discussion of air currents near windows, which arose at the recent meeting of the Heating Engineers' Society, H. W. Whitten reported some tests he had made showing the varying conditions that will obtain with leaky and with tight windows. The accompanying sketch, he stated, is intended to represent a cross section of a room, with windows on the outside wall and a radiator placed as indicated. "I have found in tests of air currents in rooms similar to that here shown that there were two distinct currents, one in which the rising column is met (providing the window is fairly leaky) by a volume of cold air. In that case the heated column immediately falls back again and makes a sort of revolving curtain over the window and wall. There is another deflected current which comes off as indicated and returns immediately to the bottom of the radiator. There is very little current in the remaining space of the room, the air in this space being more or less stagnated or stratified.

"In a large number of experiments where I placed the radiator on the inside wall (and I will say here that the best results were obtained with radiators of the flue type, so called), the warm air currents were found to be coming up over the inner wall, and, if these windows were made tight, going clear to the wall, then falling and going back to the radiator. The colder the outside wall and window the more rapid the flow of this current.



Ordinary Window.

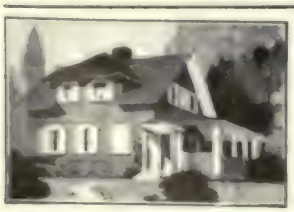


Metal Weatherstripped Window.

DIAGRAMS OF AIR CURRENTS IN FRONT OF WINDOWS.

"I have found the efficiency of the radiator greatly enhanced by putting a floor register underneath the radiator connecting with a cold-air duct so that the regulated quantity of air may be introduced if found necessary, and circulated through the radiator. If this window was not tight, I found a cold-air zone here which the warm-air current did not penetrate.

"In other words, this revolving circle of air was restricted, but if the wall and windows were made tight the current practically filled the entire room, and a general diffusion of heat was obtained across the entire room."—Heating and Ventilating Mag.



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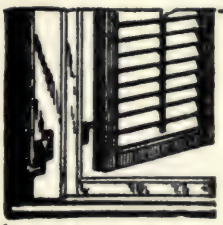
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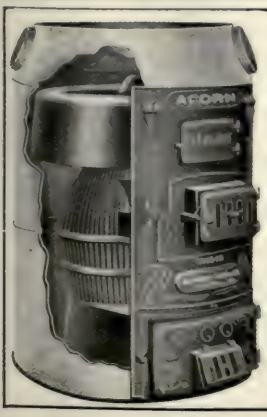
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SPLINTERS AND SHAVINGS

Laying Oak Floors.

By W. L. Claffey.

THE laying of oak flooring is not very difficult. Any first class carpenter can make a good job. Some judgment and care is very necessary in order to produce the best results.

A sub-floor should be used under both the 13-16 inch and 3-8 inch thicknesses. The sub-floor should be reasonably dry and laid diagonally. Boards of about 6 inches wide are preferred. These boards should not be put down too tight and should be thoroughly dried and cleaned before the oak flooring is laid.

It is well to use a damp proof paper between the oak flooring and the sub-floor Where sound proof results are desired, a heavy deadening felt is recommended.

Oak flooring should be laid at an angle to the sub-floor. After laying and nailing three or four pieces, use a short piece of hardwood 2x4 placed against the tongue, and drive it up with a sledge.

The nailing of oak flooring is very important. All tongued and grooved oak flooring should be blind nailed. The best floor made can be spoiled by the use of improper nails. The steel cut variety is recommended for all blind nailing.

For 13-16 inch use 8 penny steel cut flooring nails.

For 3-8 inch use 3 penny wire finishing nails.

The maximum distance between the nails should be:

For 13-16 inch thicknesses, 16 inches.

For 3-8 inch thicknesses, 10 inches.

For even better results, it is recommended that the nails be driven closer than indicated.

Scraping Oak Floors.

After the oak floor is laid and thoroughly swept, it is best to scrape it, in order to get the best results for a nicely polished surface. This scraping process can be done by the ordinary scrapers, such as used by cabinet makers, or by one of the many types of power or hand scraping machines that are generally used by contractors and carpenters. Always scrape lengthwise of the wood and not across the grain. A floor properly scraped looks very smooth, but still it should be thoroughly gone over with No. 1½ sandpaper to obtain the best results in finishing. After this, the floor should be swept clean, and the dust removed with a soft cloth. The floor is now ready for the finish.

What Is the Reason.

Lumber manufacturers, and the producers of a number of other commodities in this country, would like to know the secret of the coal industry.

A man who goes from one city to another by rail pays the same price for his ticket regardless of whether he goes over a long or short line. The law regulates the fare.

The man who pays a gas or electric bill to the private corporation that supplies light and power pays the same as his neighbor for the same amount of service. That is regulated by city ordinance.

Uniformity of action or unanimity of opinion on the part of lumber dealers (there is no such thing as uniformity in prices) is condemned by the public and made the excuse for civil and criminal suits by the federal government.

On a resolution passed by the house of representatives and the senate of the United States congress, the government spends five years and hundreds of thousands of dollars chasing a will-o-the-wisp, and trying to get evidence of price agreements when the evidence is perfectly plain that there is no such thing as price uniformity.

Yet, every man who buys hard coal in the month of April pays a certain price, regardless of the dealer from whom he buys. In May he pays ten cents a ton more; in June he pays an additional ten cents. When the coal miners struck a number of years ago they succeeded in securing an increase in wages, and the price of coal advanced enough to pay the

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Everybody knows that the price of coal is established absolutely and that every dealer is obliged to sell at the established price.

The so-called beef trust is being prosecuted by the government; the Standard Oil Company and the Tobacco trusts have been dissolved after civil suits were tried. The retail lumber industry is preparing to defend itself in the courts; but the coal industry appears immune. What is the influence that effects this result? What is the secret? What is the reason?—Miss. Valley Lumberman.

The Prize Bungalow.

One of the features of the clay show was the five-room brick bungalow. This was built of brick complete in the north end of the Coliseum in the record-breaking time of four days. The O. W. Rosenthal Company, of Chicago, who laid the brick work, began work Saturday afternoon and had the building under roof Monday morning. The walls were constructed of common brick, faced with a dark rough-faced brick, while the roof was a green glazed German Brookville tile. The interior of the bungalow was complete in almost every detail, a large brick fireplace in the living room being one of its main features. A large amount of space around the bungalow was devoted to a lawn and garden, decorated with artificial grass, flowers and shrubbery, this being enclosed by a substantial brick wall. Attractive vines were spread over the exterior walls and a box of potted flowers in the front upper windows lent beauty to the appearance of that portion of the bungalow. This bungalow was the prize design of a $1,000 contest carried on by the 'Brickbuilder," of Boston, in behalf of the Clay Products Show. The bungalow was erected and offered to the winner of the marble-guessing contest for the purpose of swelling the paid admission fees. Every visitor paying his way into the show was allowed one guess on the total number of marbles in a large carboy placed in one corner of the yard of the bungalow. There were 12,505 marbles in the flask. Mrs. H. C. Lemmon, 9206 Commercial avenue, Chicago, won the prize by a guess of 12,502. The Exposition Company, in connection with the brick manufacturers and dealers of Chicago, are to build, at a cost not exceeding $3,000, a similar bungalow for Mrs. Lemmon on a lot she may pick out.—Clay Worker.

Editor's Note.—Interest in the concrete house is so general that some extracts from the excellent specifications for stucco on metal lath, issued by the Associated Metal Lath Manufacturers, are here given.

"Metal lath is recommended because wood lath absorbs moisture required by the mortar. Wood lath drys out and shrinks away from the plaster, following which the alternate shrinkage and swelling resulting from moisture causes unsightly cracks and finally failure. Wood lath, also, increases the fire risk, and it will harbor vermin.

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* * *

The March issue of The Spectrum—the dainty booklet on decoration published by the Sherwin-Williams Co., is of such unusual artistic appeal as to win special mention. The paper and illustrations, soft as a pigeon's wing, are the acme of refined press work.



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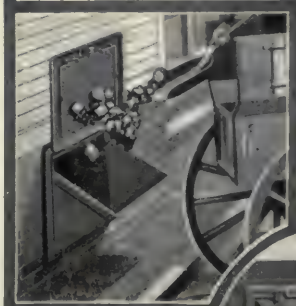
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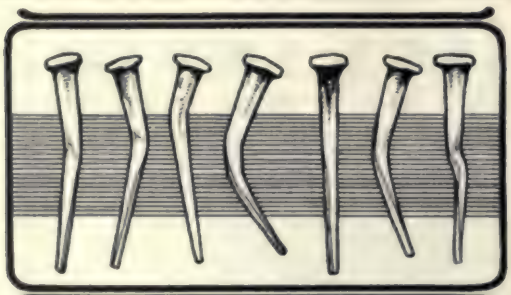
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* * * *

The popularity of stucco construction for houses is stimulating manufacturers to a wonderful output of material and combinations. The latest word in such construction is the J. M. Asbestic Wall Plaster, manufactured by the Johns-Manville Co. for use on exteriors. The special merits of this covering are set forth in their Catalog No. 109, with illustrations of buildings treated with this composition. The Johns-Manville products are noted for their excellence and Asbestic would appear to be no exception. A special fire-resisting quality is claimed for Asbestic, as well as attractive appearance.

* * * *

The Glidden Varnish Co. have published for the benefit of architects and the trade, "Specifications for the Treatment and Finishing of Concrete Floor Surfaces," which are of real value to builders. So much attention now centers on concrete surfaces, both exterior and interior, that many materials for treating them have come upon the market, and these detailed specifications relative to the proper use and application of such materials are most timely.



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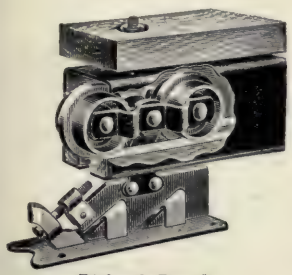
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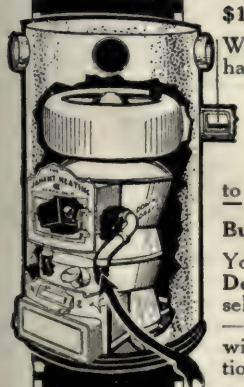
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THE CHARM OF A PLAIN STUCCO—RELIEVED BY FLOWER BOXES AND HANGING BASKETS.

KEITH'S MAGAZINE

VOL. XXVIII JULY, 1912 No. 1



STUCCO HOUSE IN FLORIDA WITH FLOWER BOX TREATMENT.

Hints for the Use of Flower Boxes

By Chas. Alma Byers

THE window box, as an exterior decoration, is growing steadily in favor and justly so, for it adds a charm to almost any architectural style. Often they are the chief relief to bare plaster surfaces, and the value of their softening and decorative effect in such situations is very great. This value is well illustrated both in the frontispiece and the illustration on the first page of this article, where large surfaces are broken only by a few regular openings, and where the charm is wholly dependent upon line, and shadow and the grace of flower boxes and baskets.

In each illustration shown the flower box is a marked addition to the attractiveness of the exterior, in the case of the frame cottage it is really the whole thing, for without the flower box and its accessories the house would be a mere shelter, conveying no sense of home. The illustrations show the air of refinement and distinction bestowed upon these exteriors by the use of flower boxes, and one can but desire their more frequent employment.

They can be so managed as to be in bloom the greater part of the year even in cold climates, and with a little trouble,

the substitution of dwarf evergreens, barberries and the like would afford a note of color even in winter.

In view of the increasing use of window box decoration, the following hints as to placement and culture may be of interest.

Window boxes should be built long and narrow, as long as the window is wide, at least, and about ten inches deep. The width should depend to a degree upon the size and the style of the house, but in most cases a box from eight to twelve inches wide will be found quite suitable. They are fastened in place in various ways—sometimes by brackets underneath and sometimes by chains that are fastened to the outer corners of the windows, giving a sort of hanging basket effect. Of course the effect will be all the better if they are built into the house in such a way as need no especially prepared supports, and to be in reality a part of the architectural design. They should be painted to accord with the color of the house or the trimming, and should in every other way be made to harmonize with the general outside appearance of the house.

The boxes should be filled with an earth mixture suitable to the demands of the particular plants to be used, and those plants should be chosen with a view towards the location of the boxes, whether in sun or shade.

East and west boxes should be filled with good garden loam intermixed with well rotted manure. Boxes for the north side of the house, where sunlight never or seldom reaches, should be filled, if possible, with a mixture of rich loam and leaf mold, and may also be given a quantity of very old manure. Since the amount of earth per plant is small, the substance or richness of the soil must be sufficient to make up for the deficiency in quantity. The plants will also require considerable water, and to prevent its running to waste between the earth and the side of the box the dirt in the center of the box should be lower than that around the edges. The earth should reach to within about two inches of the top of the box.

A very pretty and simple grouping of plants suitable for almost any architectural style and for all partly sunny locations is made of geraniums and vining



HERE THE FLOWER BOX ON BALCONY IS A PLEASING ADDITION.



THE LONG BOX WITH VINES DROOPING TO THE GROUND.

asparagus (plumosus), or of geraniums and springeria. There are so many different kinds or colors of geraniums that one can always select a color to harmonize with the colors of any house, and the green of the plumosus or the springeria is, of course, always suitable. Geraniums and heliotrope also go well together, and this is a combination that will be found especially suitable for sunny, west windows.

The most common mistake made in the



CHARM IS GIVEN TO THE PLAINEST COTTAGE BY THE FLOWER BOX.

selection of plants is probably the growing of too many colors in the same box. Then, too, one often finds combinations that do not suit the color of their background, the house,—such as bright scarlet for yellow colonial architecture. For a house of this kind a much prettier effect will be produced by the use of soft pinks and rose shades. For houses in which the grayish effect is brought out the combination of single petunias and a vining green will be found very satisfactory. The double pink and white petunias always combine well with the feathery bloom of the wild cucumber.



SECOND STORY FLOWER BOXES.

Window boxes for the east side of the house should be given plants that require but little sunlight. The ivy geraniums will do well for this location, as will also the caladiums and the tuberous begonias.

For the north side the very tender plants should be used—those which require very little or no sunlight. Fuchsias, especially the trailing varieties, ferns, asparagus vines, and also begonias, thrive here. Primroses make a very desirable plant for the north side, and they will bloom here the greater part of the summer.

House plants always make very desirable window box plants for the summer, and, if care is taken in their transplanting, they may be used to their improvement. There is, however, a way of using house plants for window boxes without transplanting—by simply using the empty window boxes for holding the pots of plants. This, however, is a sort of "lazy-man's" way of doing things, and there is no good reason why it should be done, unless it be to create a temporary display.

There are, besides the plants named above, many other flowers and vines that make very pretty window box displays: the white, buff and pink phlox drummondi, and the scarlet, white, and pink verbenas—either group being suitably combined with purple ageratums; the scarlet and white anterrhinums, and the white camphor geraniums; the candytuft,

the sweet alyssum, and the brilliant nasturtiums for vines.

For boxes for kitchen windows, if a change from the others be desired, mint and parsley may be used.

There are three causes to which may be attributed nearly all failures in window gardening. The first of these is a lack of knowledge of the vital necessities of plants. Many people think that thrusting the plant or seed into the soil is all that is necessary, little realizing that the plant requires food and water, and that when the supply of these in the soil is exhausted, a new supply of each must be provided. One should know something of the habits and necessities of plants in order to be able to care for them in an intelligent manner and to secure the best results.

The second cause of failure is the selection of plants unsuitable for the rooms in which they are to be kept.

The third and probably the most common cause of failure is neglect. Plants require as careful attention as do pet animals, and should receive daily care. A few days of neglect may permanently ruin a handsome specimen.

What Plants to Use

Plants for window boxes on the north side of the house—Japanese morning glories; ivy geraniums; glechoma; begonias; trailing fuchsias; fancy caladiums.

Window boxes on the south side of the house—Heliotrope; geraniums; maurandya; coleus; weeping lantana; abutilons; crotons; ageratum; antirrhinums; phlox drummondii.

Window boxes on the east side of the house—Nasturtiums; tuberous begonias; thunbergias; antirrhinums; vincas; manettias; ivy geraniums; maurandya; heliotrope.

The Fireplace and Its Fittings in the Country Cottage or Bungalow

By Louise Shrimpton

OPEN fires more than anything else give cheer and comfort to the country house. A living room fireplace seems indispensable as a heater in the spring and fall or on cool summer evenings; in winter a smouldering fire on the hearth forms a gathering point for the family and an efficient aid to the heating plant. The smallest cottage now-a-days possesses at least one fireplace, in the family assembling room, and there are often one or two others in the sleeping rooms. The temporary eclipse suffered by the fireplace when stoves came in and open fires went out is completely recovered from, and lovers of the open fire are once more in the fashion. Thus the style and material of fireplaces, their proper construction and their fittings, are important considerations with every home builder.

In style, the fireplace follows that of the house interior. But elaborate rooms are not often planned for the cottage or bungalow. The house that is enjoyed in the country is informal in treatment, containing something of the roughness and wildness of its surroundings; or if a Period style is followed it is the period when our colonial ancestors undertook the dangers of a pioneer life, and built new homes for themselves in the wilderness,

modifying their European traditions to suit a new environment. Frequently fireplace and house alike are products of the modern style that has shaken off all artificial traditions, adhering only to those that are simple and practical.

Whatever the style of the interior, to employ the same material for both chimney and fireplace is the most direct and sincere method to follow in the small country house. The fireplace then appears what it really is, a structural feature, not a merely decorative one. The using of material different from the chimney, such as tile, expensive brick, or elaborate wood or stone, as fireplace facing, however appropriate in a costly and sophisticated interior, seems out of place in a simple country home. If rough stone or brick are used in the chimney, the same material showing in the fireplace is found satisfying in effect, giving a feeling of strength and sincerity to the living room, as does any bit of structural wall or beam that it is possible to disclose. Moreover, if ordinary hard fired brick is used for the chimney, the same material is found uncommonly successful for interior use as well, possessing a beauty of texture and color lacking in some of the more costly brick. The stone of a region, too, is invariably, in large simple rooms, pleasing and harmonious even if roughly set. In the sleeping room, however, even if it is of primitive sort, tiles in a dull glaze, or cement, often cover the fireplace front, since they give a smooth surface that does not catch the dust



STONE EXCAVATED IN THE LOT WAS HERE USED WITH INTERESTINC RESULTS.

That the material of chimney and fireplace should be procured if possible in the neighborhood seems indisputable. If obtained near the site structural features invariably appear the natural outgrowth of their surroundings. It seems also a logical and sensible thing to use material that is close at hand rather than that brought from a distance, even if the house plan selected calls for the latter. Thus if stone is selected for the New England fireplace, granite from the fields is used with peculiar fitness; or in the Green Mountains the snowy white stone of the region is utilized; in Central New York limestone is used, except close to the fire; and in

California and the West the native cobble stones. If a quarry is near by, roughly cut stone may often be procured for the cost of hauling. Or it sometimes happens in a particularly stony region, that enough stone is obtained in excavating a cellar to build a chimney and fireplace, in which case plans are promptly changed to include this material.

If stone is not native to the region, but a brick kiln is near at hand, home builders often select their own brick, picking out those that vary in tone, usually thought by the makers less desirable than the evenly toned sort. Brick from an old chimney or wall is sometimes procured for a new building, as exposure to the air has given it tone and color. Old bricks require much time spent in cleaning them for use, and care must be taken to select only the perfectly sound. While artificially pitted and monotonously toned brick are undesirable, though beloved of some manufacturers, there are plenty of interesting brick, such as the Harvard with its varied tones, for the home builder to select when to choose material in the vicinity seems inadvisable. Colonial wooden mantels, usually of whitewood painted white, and used with red brick, are of simple design, the elaborate mouldings and ornament of the style not being attempted.



Modern Fire Set in Wrought Iron.



This Fireplace Was Made of Brick from An Old Chimney.

Ordinary gray mortar has often the best effect in the building of the large fireplace. In our illustration of a rough stone fireplace the stone was excavated on the site and utilized at once in the construction of chimney and fireplace. Ordinary mortar was employed, and the patterns formed by the skillful putting together of the stone are the only decoration. This fireplace, which reflects something of the grandeur of woodland surroundings, is in



FIREPLACE PLASTERED—TINTED CREAM COLOR.

a good sized country house. In striking contrast is the little fireplace in another illustration. Old brick is the material, found on the site in an ancient chimney and valued by the owner of a tiny bungalow for its beauty of color, grayed and modulated by exposure to fire and air. In this fireplace, as in many others of simple type, cooking is done over the wood coals, the results rivaling in flavor those of the modern fireless cooker.

There are many desirable tiles from which to choose if tile is selected as facing for the sleeping room fireplace. A charming selection for the colonial room or the child's nursery is the Dutch tiling imported by the Dutch shop in New York. The tiles are rather small, in Delft blues showing tiny landscapes, or in various gay colors on a white ground in conventional flower patterns. There are many different patterns giving a varied effect to the fireplace and an opportunity for story telling to children. The Mercer and the Moravian tiles in old Moorish or Spanish patterns make interesting inserts in a fireplace facing of plain tile or they are sometimes used with brick. At the Bowl Shop in Boston tiles showing local landmarks are to be had and are of interest to those within the radius of the Hub. Other tiles with a dull glaze are made now by many manufacturers. Those that show something of the effects of the fire, having irregularities of color and contour are selected. Tiles of two colors in varying tones are sometimes chosen and laid so as to give contrast or harmony. The Grueby Rockwood tiles are still, perhaps, the most beautiful in texture and color.

The fireplace that is plastered or covered with cement may be given a rough finish below the mantelpiece, or may be kept fairly smooth throughout, though without the final smooth coat that often peels off. It may be left in the natural gray of the plaster, or the last coat may be tinted before it is put on, or a light tint of oil or of water color may be applied after the plaster has set. A warm cream color is effective. The walls surrounding it might be painted in a flat oil or water color, or papered in a plain tone darker than the fireplace, throwing it into

relief. The overmantel might be stenciled in a simple design that repeats the colors of draperies and other decoration. This style of fireplace is suitable with quaint cottage furniture or with fumed oak in brown or green.

The material and style decided upon, the construction of chimney, flues and



COLONIAL MANTEL AND ANDIRONS—FIRESCREEN WITH BRASS KNOBS.

fireplace, and the size and proportion of fireplace and fire opening are the next points for the owner of the country place to consider.

While the living room fireplace should be of good size, it is best not to make it so immense that all the heat goes up the chimney. We have not the wood to burn that our forefathers had and their cavernous fireplaces are out of the question for us. The size of the fire opening must, however, depend upon personal preference. As far as the beauty of the fireplace is concerned, proportion is more important than size. The opening should be wider than it is high, the tall narrow fire opening being mean and inhospitable looking, except perhaps in a very small fireplace, such as those the English build. If the fire opening is two and a half feet high then a three-foot width is in good proportion, though the width may be much greater in proportion with good effect, as in our illustration of a large brick fireplace in a country house.

To build a fireplace that does not smoke is essential though sometimes not accomplished. The relation between the opening into room and the flue area has, experts say, much to do with the smoke

problem. The flue area should be one-tenth of the fire opening area. The smoke chamber, which keeps the smoke going up steadily into the chimney, is a space once large, and used in colonial times for curing meats, now much smaller but still important in its influence on the smoke. The fireplace back should slope forward, throwing the heat of the fire into the room. Directly above the fire opening the back is built still further forward to form the chimney throat, which should be three or four inches deep while it keeps the width of the fireplace opening. The trap for ashes at the rear of the hearth, now often included in fireplace building, is by some fireplace lovers considered of doubtful utility. A mound of ashes, keeping the fire well up from the hearth, adds to its brilliance. The ashes are raked over live embers at night, keeping the fire from day to day, and may rest undisturbed for a considerable time.

The necessary fire tools consist of andirons and a fireset, including poker, tongs and shovel, with some sort of stand or holder. A pair of bellows and a small long handled broom are sometimes added to the list. Another essential is a receptacle for holding wood. A firescreen is necessary if the fire is to be left with safety, and occasionally a fender is seen.

Andirons and fireset to go with the colonial mantel are obtained from dealers in the antique, or unearthed from some old attic. Reproductions of the old brass fire implements can be obtained from decorators or from dealers in fireplace materials. Some of the small iron andirons are reproduced as well as the brass, and are suitable for small fireplaces, costing about three dollars a pair. In our illustration of a cement fireplace a pair of these small andirons is seen. Quaint and adequately filling their purpose, they were cast at an old country forge after an old pattern. A pair of old brass andirons in the delicate lines that many of them possess is shown in our picture of the brick fireplace. For brass andirons resembling our colonial models, though somewhat heavier in contour, the Russian metal work shops in New York, where a street is lined with them, or in other large cities, may be explored. The Russian work is inexpensive and if carefully selected proves interesting.

Andirons and firesets modern and of original design are rather difficult to find in good patterns. A plain set may occasionally be found in a department store, and the most distinctive models are made by Arts and Crafts furniture makers. A method possible for those who have country homes is to employ a village blacksmith to forge handwrought andirons of extremely simple sort. Another way is for two or three families to have a simple design cast by a country workman. If several pairs are cast this method is not expensive.

The fireset holder may be a separate stand, holding all the fire tools, or it may consist of a metal arm or clasp riveted to the fireplace at a proper height so that the tools rest on the floor. In the latter case it is out of the way—an important point. Very handsome standards as well as clasps have come down to us from colonial times, or are designed to go with Mission types of house furnishing, in either brass or iron or perhaps in iron with brass trimmings.

Wood baskets and wood boxes of various styles are on the market, for sale in all sorts of shops. A built-in fireplace seat often contains a box for firewood or a cupboard in the wall next to the chimney serves the purpose of wood holder. In some houses a trap door near the fireplace discloses a supply of logs easily reached, but this would better be in a hall closet near the living room.

Fire screens, with brass or steel frames, are for sale in the shops, or made to order to fit a fireplace. The fender, not often

seen around the modern hearth, is especially pretty and useful in a sleeping room or child's nursery, and is either in brass or iron to match the fireset.

A certain harmony should exist between the fireplace tools and other metal work in a room, the lighting fixtures, door pulls, handles, hinges, and so forth. They may easily all be of the same metal and may harmonize in style, adding one of those subtle touches that make a room distinctive. Also the color scheme of the fireplace,the colors of brick and tile, of woodwork and over mantel decorations, should be selected to harmonize perfectly with the color scheme of the room. One sometimes sees fireplaces put up without the least apparent regard for their surroundings, making uncomfortable discords in an otherwise pleasing interior. Often, on the other hand, the fireplace holds its proper place as a structural feature and the focusing point of the whole room, and is the key note of a color scheme upon which everything else depends. Draperies and decorations are not infrequently "tried" against the fireplace, to ensure perfect harmony, and an individual setting for the life of a family has been secured.

The careful selection of material, found if possible near the site, a regard for good design and proper construction in the fireplace, and a critical search for those servants of the fire, the andirons, poker, tongs and shovel, will result in satisfaction to the home builder, while if ill built and smoky, inharmonious in color and badly fitted with fire tools, the fireplace is a source of distress rather than of pleasure.



GOOD STYLES IN MODERN ANDIRONS.

A Group of Florida Bungalows

THE seductive bungalow has invaded every section of the country and now appears on Dakota prairies as well as Massachusetts' rock-bound coast. It has been "adapted" to every situation, and pretty nearly every kind of architectural "feature" is now tucked onto the low-roofed, simple structure of the orient, which served as the original model. Not long since we beheld with speechless awe, a dwelling called a "Japanese bungalow" — whose three stories crowned with "Japanese" roofs gave one the feeling that it was an immense flying machine and would shortly flap those roofs and start.

One can but feel that the South is the appropriate setting for the bungalow, that here it is peculiarly at home, and this group of Florida bungalows differs just enough from the California article to show how the style adapts itself to any local conditions or surroundings. Of course this adaptability and the picturesque possibilities of the style which yet is comparatively inexpensive, is the cause of its great and increasing popularity.

Though many thousands of dollars can be and frequently are put into the bungalow type house, most of these dwellings are simple, though artistic, and cost from $1,500 to $3,000.



A ROOMY, RAMBLING BUNGALOW OF TRUE SOUTHERN STYLE.

The first bungalow shown cost considerably over the last named sum as it is a rambling structure, covering much ground and involving a corresponding amount of roof construction—two things that add materially to cost. In southern climates, however, it is almost a necessity to separate the living rooms of the house from the kitchen and service part. The pergola-porch is here the connecting link. The wall shingles are simply oiled and the roof is stained a mossy green.



THE FAMILIAR COBBLESTONE CHIMNEY IS A FEATURE OF THIS FLORIDA BUNGALOW.

In the second illustration the cobblestone chimney has been made a prominent feature of the design, the boulders carried onto the porch wall.

The third bungalow shows how modern methods have penetrated even Florida pines, as the substantial wall of hollow tile indicates. This very modern looking bungalow conforms delightfully with its suburban setting of tall pines.

All these bungalows have floors and finish of southern pine.

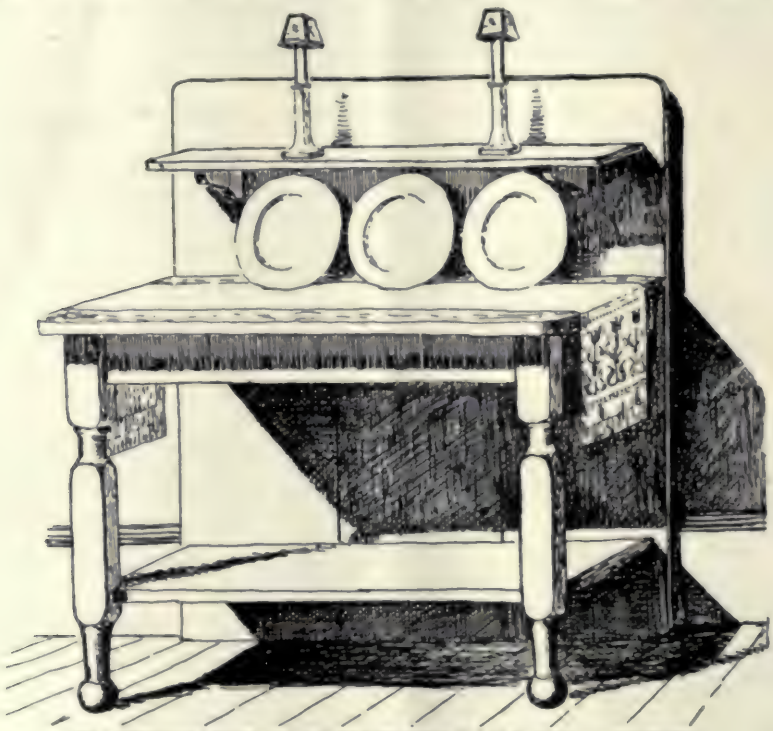


A MODERN BUNGALOW AMONG FLORIDA PINES.

Improvised Furniture for the Country House

By Eleanor A. Cummins

WITHOUT following the notable example of the lady who furnished her drawing room with broomsticks and tomato cans, it is possible to achieve pieces of furniture most useful in a modest house without much more lumber than the packing boxes will supply, and with little more ability than that of sawing straight and driving a screw. Makeshifts, it is true, but often very charming makeshifts, and giving such a world of pleasure in the making.



TRANSFORMATION OF AN EXTENSION TABLE INTO A DRESSER.

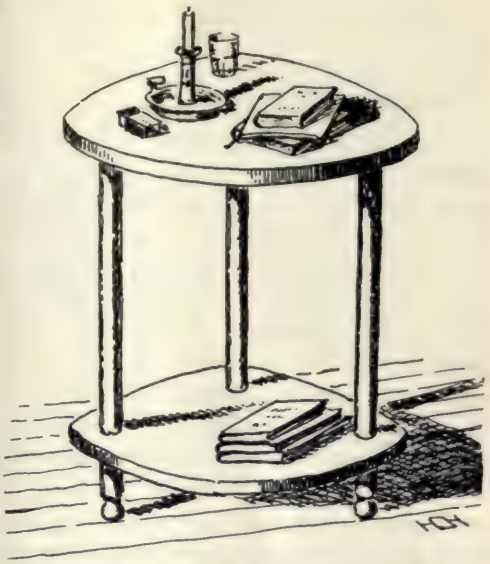
Proportion, accuracy of measurement, finish, these are the things that tell, and a liberal use of the lead pencil and a choice of soft wood are helpful. A sloyd knife has many uses, and a scratch-awl, with which lines to be sawed can be heavily ruled and scored. Unless you are very fortunate in getting smooth packing boxes, you will need to patronize a moulding mill for strips for finishing purposes, and in most cases a square corner will look better than a mitred one. When it comes to finishing, a coat of good enamel over one of stain is kinder to amateur work than stain and varnish or wax. For treating new wood, the Mission stains, which color and finish with one

application, are good and effective, particularly in connection with canvas or burlap, which are the mainstays of the domestic upholsterer.

A divan of some sort suggests itself naturally and is very easily managed, as well as useful. Good proportions are four feet of length, twenty inches of width and height. Nine-tenths of all the shirtwaist boxes and utility chests are disproportionately high. It is usually possible to get a packing box of the right size, or to put two smaller ones together. Little is to be done but to cover the sides plainly, carrying the material around with no joining except at the back, and to fit it with flat castors, the last a most important point. The cover may be hinged, but a better way is to keep it in place by battens of two-inch stuff, nailed close to the inner ends of the cover, and exactly the length of the inside width of the box. Now comes the original touch. Pad the cover smoothly and cover it with carefully stretched canvas, burlap, or what not. Then nail on a strip of wood, an inch and a half square, flush with the cover, for a border, joining it at the corners log cabin fashion, each strip being cut an inch and a half longer than the side of the cover for which it is intended. It is an improvement to put a corresponding strip around the bottom of the divan.



Sectional Bookcase Made with Packing Boxes.



This Triangular Table Was Made with Curtain Poles.

Anyone who can nail four pieces of wood together at right angles can make a wardrobe screen. The material used should be fairly heavy, and the bottoms of the folds weighted. Cross pieces for hooks are set in six inches from the top of each fold, and there should be four folds, five and a half or six feet high, and at least twenty inches wide. The lower part of each fold may be fitted with pockets, and an examination of the sewing screens sold in all the department stores will give one a good idea of the best way to fit up such a screen, as the principle is the same. The covering of each fold should be nailed on before it is hinged, and an inner covering of some stout material is desirable. If cretonne is used for the covering the folds should be edged with gimp, but with a plain material

ornamental nails are better. Such a screen drawn about a corner washstand improves a dressing room, and answers all the purposes of a closet.

If you have an old extension table with square ends, cut it in two. Fasten the other half of the top to it at right angles, like the hinged half of an old fashioned card table. Stand the erection flat against the wall, and support it at the center with a large iron bracket. Screw two small brackets, or better, angle irons, to the surbase to support one of the leaves for an undershelf, letting it rest at the front on shelf pegs, set in holes in the front legs. Get a pair of turned brackets, or use a pair which has held a curtain pole, to support a narrow shelf made from one of the leaves, and attach to the upright back of the dresser. This should be a little shorter than the dresser, have curved front corners and had best be cut out by a carpenter. It should leave room below for a row of plates, for which a groove should be scooped out in the top of the dresser. The needed finishing touch for this piece of furniture is a linen or crash scarf, hanging nearly to the level of the undershelf at the ends. Three legs of the table are undisposed of. They can be shortened by six inches, fitted with a three-cornered top, with an undershelf supported on shelf hooks, and make a creditable appearance as a bed room table. Only a very simple table could be utilized for this sort of reconstruction.

For a bungalow, with a wooden interior finish, a capital dresser can be made from an ordinary long and narrow kitchen table, fitting it with an undershelf and setting on the wall just above it two or three shelves as long as itself, finishing it to match the room.

One of the easiest things to improvise is a sectional bookcase, and the boxes in which canned corn or tomatoes are packed are strong and of good proportion. All the carpentry needed is nailing a narrow molding at the top of each section to keep the one above it in place, and a strip of plain inch and a half stuff at the bottom. The look of the whole is much improved, and this applies to all shelf construction, if the upper section is given an extra top, projecting an inch and a half at front and ends.

Tabourettes or small tables can be made from packing box covers, with sections of curtain pole for legs. Two sections of board are needed, one for the top, the other for an undershelf, either square or triangular, and either shape is much improved if the edges curve outward slightly. The leg sections must be absolutely square at both ends, and holes for the screws should be made in both boards and poles before the table is put together. A clever way of attaching the lower part is with long shanked castors. Holes fitting the shank easily are made in shelf and legs, the castors are passed through those in the shelf, the shanks smeared with glue and wound with coarse thread. When the glue is quite dry, the table is set on the floor, legs up, more glue is smeared on the shanks and they are driven into the holes in the legs, which they should fit tightly. The best finish is to stain or paint the legs, covering the top and shelf with cretonne with an edging of gimp. The undershelf should be covered before it is put in place.

If you have a section of round clothespole, you can make one of the old fashioned pillar tables. Cut two triangular pieces, with curving edges, one a little smaller than the other, for the top and bottom, cover the lower one with cretonne and screw it to the pillar, taking care to get the exact center of each. Cover the pillar with a strip of cretonne, turning in the lower edge neatly and joining it with tiny brass-headed tacks, then the top and lastly edge top and undershelf with a gimp and screw to each angle of the latter either the knob of a curtain pole or one of those used to keep a door from marring the surbase.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

Two Simple But Artistic Country Homes Costing Less Than $2,000 Each to Build

By Mabel Tuke Priestman



GREEN GATE IS CHARMINGLY PLANNED WITH ITS WELL BALANCED ROOF LINES AND WALLS OF RED, HOLLOW TILE.

THE country lends itself to the building of artistic and simple homes, and it is very necessary that each cottage should be planned to suit the requirements of those who are to live in it. It should be the aim of everyone to have their home built in such an attractive manner that it not only will be thoroughly adapted to the individual needs of the owners, but will



ANOTHER VIEW OF GREEN GATE, SHOWING PERGOLA WHICH WILL SHADE COMFORTABLE SEATS.

give a feeling of comfort and hospitality. When the cottage is built on simple, practical lines that make for comfort and utility, the result is an artistic and attractive home.

The cottages illustrated have many interesting and unusual features, and yet they are all inexpensive. Green Gate is particularly attractive, not only in the texture of its walls but for its strength of coloring and well balanced roof lines. It is built for an all-the-year-round cottage and therefore has a good cellar containing a heater. The underpinning and chimney are of field-stone laid up at random. The walls of the first and second story are made of hollow brick tiles, a most economical brick, as it does away with the necessity of lathing. The thickness of the hollow brick enables the house to be warm in winter and cool in summer. The only necessary finish to the interior walls is a coat of plaster. This was left rough cast and the color was added before the walls were plastered. The warm red of the hollow tile bricks blends admirably with the roof tiles, which are darker in tone than the walls. The doorway is very picturesque with its overhanging roof and settle. The woodwork is stained green while the window frames are painted white. The windows are casement, opening outwards. A pergola has been built at the side door, and when covered with vines will be an interesting feature of the cottage. The house is not cut up into little rooms, as the living room and dining room are each 16x13 feet. There are two good size bed rooms on the second floor. The ceiling beams and the woodwork are stained brown, contrasting well with the buff walls. The house was built for $1,700, divided into the following items:

Excavating and masonry	$260
Hollow tiles	350
Lumber and mill work	305
Plastering and painting	275
Roofing	300
Miscellaneous	210
	$1,700

There is something very attractive about the plaster cottage known as Red Roof. The sloping lines of the red shingled roof is in charming contrast to the warm, creamy tones of the rough

plastered walls. Being intended for a summer cottage, no arrangements were made for heating other than the large stone fireplace built across one corner of the living room. The cottage is built of frame and is plastered inside and out. The extending roof lines are supported by quaint, rough stone columns, one of the most attractive features of this picturesque cottage. Inside, the walls are divided into sections by stripes of wood, and in the living room a high dado finished by a plate-rail adds a decorative touch. The dado line is continued beneath the staircase window. The cottage although primitive in construction lends itself to decoration; a supporting column of the stairway shows some hand carving, and the furniture is both hand-made and hand-carved. The kitchen and dining room are practically one. The house being built for the owners to do their own housework, there was no occasion to provide accommodation for a maid. On the second floor are some commodious bed rooms opening onto an enclosed upper porch, which gives opportunity for sleeping in the open air.

The natural simplicity of the surroundings have not been changed, and the grass and flowers grow up in wild profusion around the house. Red Roof cost to build, $2,000.



RED ROOF IS BUILT OF FRAME AND IS PLASTERED INSIDE AND OUT.

Masonry	$320
Lumber and mill work	900
Plastering and painting	340
Roofing	290
Miscellaneous	150
	$2,000

The Best Roses for Home Grounds

By Tarkington Baker

WHAT is the very best rose for me to plant? How often that question has been asked! And how often, too, has it been shown that it cannot be answered. Conditions vary; each garden is problem unto itself. The roses that prosper and flourish and bloom and blush in my beds and borders may wither and fade in my next door neighbor's yard. Much depends on soil, on care and treatment, on pruning, on feeding, on spraying and—on the gardener. Why, with everything else equal, success sometimes seems to depend wholly on the gardener, I cannot say. But it seems to be a fact, nevertheless. There are some roses which refuse, no matter what I do for them, to respond to my cultivation. I have observed and studied the treatment accorded them by those who are successful in growing them, and I have followed it step by step, but I have failed.

Still I know of at least one rose that seldom fails to reward the planter with its plentiful bloom, even when conditions are by no means ideal. I refer to the



BANK OF MARGARET DICKSON ROSES.

Baby Rambler and its two or three sisters of the same class. It is distinctly a bedding rose, but it is always in bloom, from early spring until late fall, its foliage is clean and fresh and green and it seems to be immune from the attack of insects and disease. Its flowers, to be sure, are not large, but masses of them make a splendid showing, and the plants themselves are exceedingly hardy and vigorous.

The Baby Rambler, Mme. Norbert

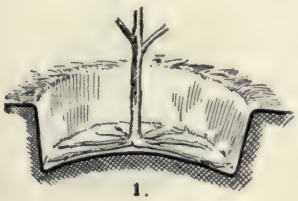
Levavasseur, is really the well known Crimson Rambler in dwarf form. It attains a height of twenty inches. And I call attention to them particularly because I cannot believe that they are as well known as they should be. When planted in masses, eighteen inches apart, in rich, stiff soil, I know of nothing that produces a better effect.

No plant requires more care in planting than the rose. The beds to receive them must be deeply dug and well rotted manure incorporated with the soil. Cow manure, being cooler, is best. Upon receipt of the plants from the nursery, all broken roots must be carefully cut off with a sharp knife and, in setting out, the roots must be spread so that there is no crowding and all lie easily, with a slight downward dip towards the tips.

Cow manure, well decayed, is the best fertilizer for roses. Other animal fertilizers may be used and commercial fertilizers as well. Of the latter, finely ground bone is best, supplemented by a teaspoonful of nitrate of soda to each plant early in the spring. The following especially prepared fertilizer has been recommended by various rose experts:

Superphosphate of lime	12 parts
Nitrate of potash	10 parts
Sulphate of magnesia	2 parts
Sulphate of lime	8 parts
Sulphate of iron	1 part

This mixture should be applied very early in the spring at the rate of one-quarter pound to each square yard.



1.

The right way to plant roses. Notice how the center of the hole is higher than the rest of it. The roots are laid out straight with a downward direction.



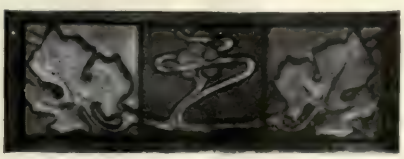
2.

The wrong way to plant roses, or anything else for that matter. Compare with Fig. 1.

The following list contains the best and most vigorous roses—those best able to combat untoward conditions:

Hybrid Perpetuals—White: Frau Karl Druschki; Margaret Dickson; Boule de Neige. Crimson: Captain Hayward; Ulrich Brunner; General Jacqueminot. Pinks: Paul Neyron; Magna Charta; John Hopper.

Hybrid Teas—Antoine Rivoire, creamy white; Killarney, pink; Mme. Abel Chatenay, rose-pink; Souvenir de President Carnot, flush-white.



Construction Details of the Home

The Hardware

WHAT is known as shelf hardware, the hardware that is always in sight and performs some useful office at all times, fits all kinds of requirements and is of endless design. to be harmonious. Different finishes may be had in the same design and it is likely that an imitation may be bought instead of the genuine metal if care is not taken. Steel finished to imitate bronze brown,



SHELF HARDWARE SHOWING DESIGNS FOR OUTSIDE DOORS IN COLONIAL STYLE WITH YALE LOCKS.

So many styles and periods are manufactured that only that appropriate to the room where it is used need be selected and this should be kept in mind when the hardware is purchased.

Colonial, Mission and other architectural styles should each be trimmed with the hardware that belongs to their style etc., will always cling to a magnet and this simple test may be applied by anyone.

Hinges, or butts, as they are called, are made with solid or loose pins and the better grades are ball bearing.

When a door opens out the loose pin butts should not be used because removal

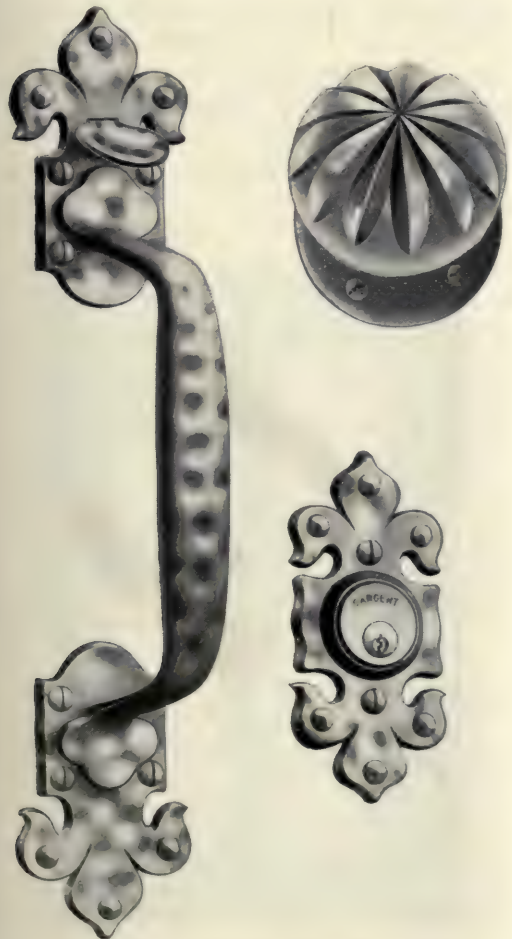
of the pins would allow the door to be opened from the outside.

For small doors to bookcases china cupboards, etc., hinges are of the simplest design but are best with loose pins.

Locks are specially designed for the position they are to occupy. Those for outside doors should allow the door to be opened by turning the handle from the inside without using the key, or from the outside by pushing a bolt if it is not desired to use the key. Inside doors are provided with simple locks of ordinary pattern with key.

Swing sash, French windows, may have turn buckles, spring catches, etc.

For these windows which may be classed with the casement variety, special provision is made by manufacturers to swing them in or out and lock them in position, all operated from the inside. These devices render them water tight, a defect which has long been charged against casement windows.



Colonial Designs for Front and Glass Knobs for Inside Doors.



Yale Lock for Front Door in Mission Design.

For ordinary two-part windows, are provided special sash locks, and locking devices which hold the sash firmly in any position up or down. Sash lifts may be morticed or simply screened to the face of the sash. Weights may be discarded by the use of sash balances or friction devices. The window should be well pro-

tected by hardware of good quality for it is here that entrance is often made.

Storm sash, screens or shutters may be operated from the inside without raising the window. Storm sash and screens are hung on identical hangers, and a very careful selection should be made, getting a pattern that will allow the sash or screen to be placed in position easily. Often times they are put on from within and an easy hanger will be appreciated by anyone trying to hang the sash.

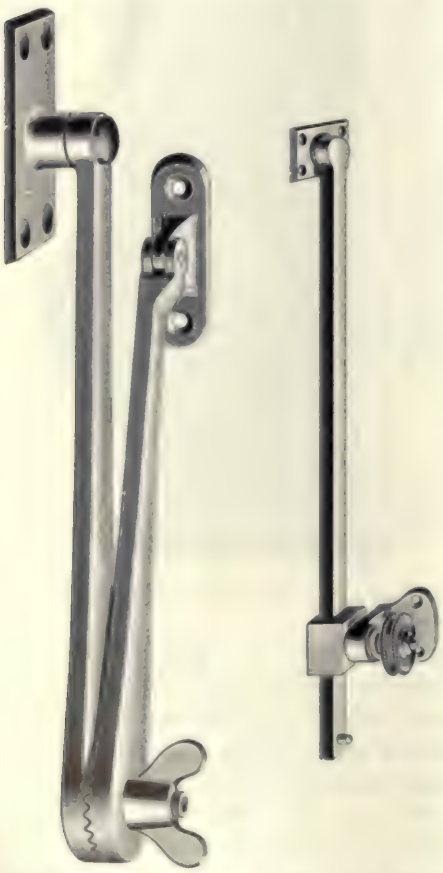
Sliding door hangers are made in many patterns and few things are more annoying than one that operates imperfectly.

Some hangers are very noisy and once they are installed it is difficult to replace them. Only those of good quality should be used.

Double action doors are provided with special floor hinges and should have push plates on each side and if occasion demands it, also kick plates. A special device is provided to hold the doors in position. A door check may be used in position when it is desirable to keep the door closed.



Bulldog Casement Adjuster for Outswinging Sash.





French Door Showing Turn Buckle.

We are indebted to Corbin Co., Yale & Towne Co., Casement Hardware Co. and Sargent & Co. for illustrations used in this article.

An Inexpensive Veranda

By John Upton

THE question of a veranda is a problem by itself. It is usually a matter of individual taste for the man who builds his own home. Sometimes the question is how to put a new porch on the old home.

The cost for this will depend a great deal on the size, shape and place where it is desired to locate it. It will make a difference whether one wishes to build out from the house or between two parts of the house. The former will require more foundation as well as more roof, cornice and pattice.

During my experience in the building line I have learned a few things here and there and pass them on to your readers who may receive some ideas that will help.

Beginning with the foundation, why not use iron pipes to support the sills which are not fastened directly to the house. One can also bore a hole with a post auger and put in a post of cedar or other durable wood.

A small stick, if it is nearly square, will often answer for sill or 2x8s may be used.

One and one-fourth inch material is usually used for the floor but if one wants a less expensive floor why not two-inch stuff? It is well to leave a space between the boards when they are not matched.

A concrete foundation and floor are used in many instances with perfect satisfaction and prove cheaper.

Two by fours make good looking columns and are much cheaper. One should be ripped making 2x2s. These should be nailed on the sides of the 2x4 in the form of a maltese cross in section. One could use larger sticks in the same way.

For plates take two 2x4s. If the roof is made quite flat the plates at the ends may be omitted. 2x4s can be used for rafters in the roof. Narrow pieces can be used for roof boards or often one can use old boards if of the same thickness. These are all covered with the shingles.

All the cornice that is really needed is a strip on the ends of the rafters. Also one on the end of the roof boards.

Even the former can be omitted if the rafters are rounded at the ends or tapered down to a point.

If one wishes a more elaborate affair, the rafters can be dressed and matched boards put on them. It is not necessary to have the house covered with matched lumber where the porch covers it. Regular clapboards can be used. The rafters may be supported next to the house by resting on a 2x4 which is spiked on the house.

Killing the Dandelions

To use the iron sulphate, or copperas, dissolve one and one-fourth pounds of salt to a gallon of water, and apply to the lawn with a spray pump. Cover the lawn thoroughly. There will be no injury to the grass. In a couple of weeks apply the spray again, and repeat the operation in a fortnight after that. The grass appears black after treatment, but, after being cut once, assumes a really richer shade of green than formerly. On stone or cement, however, copperas produces a yellow stain, which is difficult to remove. So, if you have walks of these materials, take care not to let the spray from the pump damage them.—Suburban Life.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 351 F. D. CHASE, Chicago, Ill.
B 352 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 353 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
Design No.
B 354 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 355 KEITH & WHITEHOUSE, Spokane, Wash.
B 356 JOHN HENRY NEWSON, Cleveland, Ohio.
B 357 G. M. KAUFFMAN, Cleveland, Ohio.

Design B351.

THE first two designs this month are good examples of brick houses, in each case brick being used for the entire wall structure. The design by Architect F. D. Chase is that of a ten-room brick residence constructed on a concrete foundation. The trim of the windows and doors is of white glazed terra cotta. The roof is of slate. The porch is of solid brick and the lines of the design are well in keeping with this heavy construction. Exactness of architectural symmetry is observed, particularly in the placement of openings in the windows. It will be noted that the main entrance is at the side and that there is no outside approach to the front porch, where guests may be entertained or the privacy of the family may not be intruded upon by callers.

The main stairway is in the center of the house and back of it a comfortable library is planned. The interior is exceedingly well arranged, giving the desired large livingroom across the entire front of the house which opens upon the private porch through French doors flanked by corresponding windows. This livingroom is finished in mahogany. Oak trim is carried out in the hall, library and diningroom, oak floors being used throughout the first story, birch for the second story floors. On the second floor the hall is trimmed in oak. The bedrooms are divided in their finish between white enamel and stained birch. This house is estimated to cost to build at the present time, $12,000. In the basement full equipment of laundry, hot water heating plant, etc., is provided.

Design B352.

Here we have a rather different type of brick house, one that is not as pretentious as the first study. There is more frame trim. The roof is pitched into a steep gable and contains one large central dormer. It is a home that was built out in the open and with considerable exposure to the sun, as will be noted by the protection furnished through blinds on all windows and the porch awning.

The foundation is laid up in native range rock with a stone water table. The window sills are stone and the plainness of the brick wall is relieved at the corners by quions. Under the cornice brackets a broad frieze is carried clear around the house.

The two front rooms are separated from the central hall by plain cased openings. There is one large single sliding door closing off the diningroom from hall and double sliding doors dividing diningroom from sittingroom. It is a compact plan, being 28x32 feet on the ground, and provides on the second floor four bedrooms and bath, with opportunity for two additional chambers in the third story. The face brick is a red Colonial brick, and with hot water heating plant this house cost at the time it was built $5,500.



—F. D. Chase, Architect.

DESIGN B 351

A Brick Residence Built in Chicago

Design B353.

This house, strictly a frame structure, is a very satisfying type of design to build where a large amount of room is required and the expense must be held down to the neighborhood of $5,000. It has a semi-Colonial front with a very attractive porch, the roof of which is supported by triple columns at the corners. Composition caps are used on the columns of a porch of this character with good effect. The foundation stone, range



rock, is carried out around the porch and built up into piers for the support of the porch columns. An attractive feature of the exterior is the shingled projection over the front gable.

The interior woodwork is oak. The floors on both stories are hardwood, the standing finish on the second floor being pine, painted. A very good design to select for a medium size city lot, as it is but 26½ feet in width.

Design B354.

In decided contrast to the preceding designs, we have a cement bungalow containing five rooms. The broad 10-foot piazza running across the length of the house 22 feet is covered by the main roof and gives the appearance of a broad frontage, while in fact the basement is quite small. Three sleeping rooms are planned with clothes closets and a bathroom opening off of kitchen. A central stairway between partitions leading up to the attic space provides approach to the basement by going down under these stairs. The roof is pitched low and has a wide projecting eave. There is only storage room in the attic.

It is a bungalow simple in design, very tasty and artistically treated. The triple group of windows in front are projected. They are finished with wide casings and bracketed sills. The ornamental sash makes this a very pretty pair of triple windows. The basement is under the main house, providing laundry and furnace room, likewise rear outside entrance. Inside finish is mission, treated in Washington fir, which is stained. Floors natural oak. This bungalow under favorable conditions should not cost over $2,800 to $3,000.

Design B355.

A rustic effect was obtained on this cozy suburban home by the use of rough siding eight inches in width, put on vertically and stained a soft brown. The stone work is of native boulders, the step buttresses having cement caps and the red brick chimney gives a very pleasing color note against the dark stain. The rafter ends are rough and are an effective detail. All the windows, except in the kitchen, are casement windows hinged to swing in.

The large livingroom designed for use as a diningroom also, could be readily divided if a separate diningroom were preferred. A servant's room is provided in the second story and by putting in side dormers, two other chambers could be readily obtained there, as well as a bathroom adjoining the stairway.

Special features of this house are the rustic stone fireplace with its wide plank shelf and the dining porch at the rear of the livingroom. Its location insures privacy and its size, 10x12 feet, makes it of actual use.

French doors give access from the livingroom to the porch and also from the livingroom to the bedroom passage. The cost is estimated by the architect at $2,600.

Design B356.

This Irish cottage with stained shingle roof, rounded eaves, giving a thatched effect and wide clapboards or shingles over ordinary balloon frame, recalls pleasant memories of the "ould counthry" and is eminently practical as an American home. The chimney is brick or can be plastered if desired and porch floor is cement, laid off in large squares.

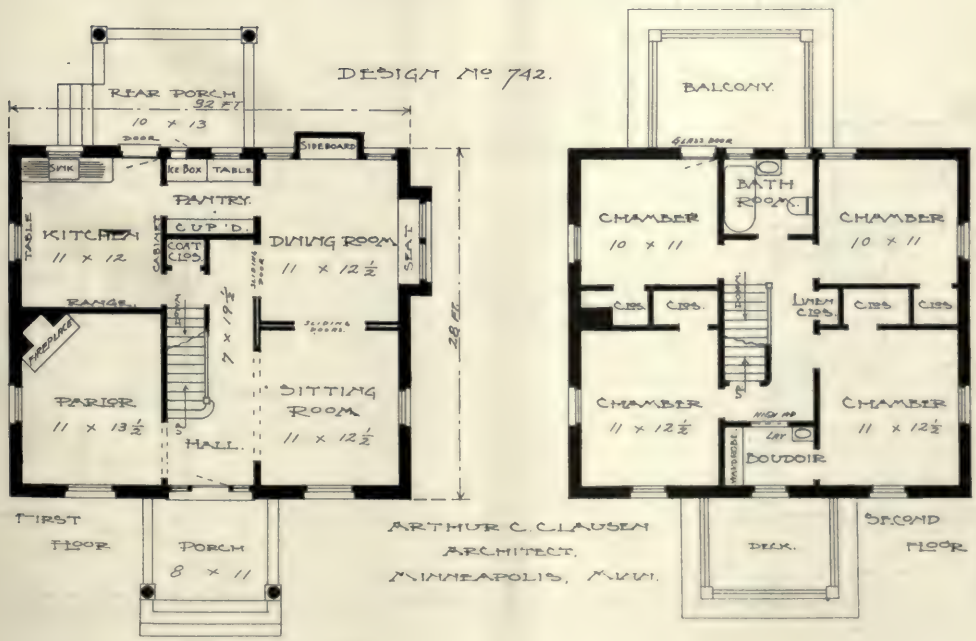
The ground floor arrangement is simple and convenient, with combination stairs and access to basement from hall and kitchen. The large closet off the diningroom can open off the rear hall if desired. The basement 24x34 feet is built under entire house. Three bedrooms, bathroom and large storage space on second floor complete the plan. The cost is estimated by the architect at $3,200.



—Arthur C. Clausen, Architect.

DESIGN B 352

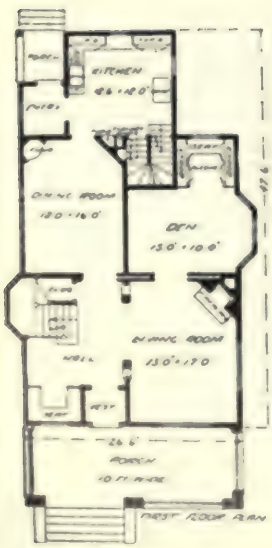
Red Brick Veneered



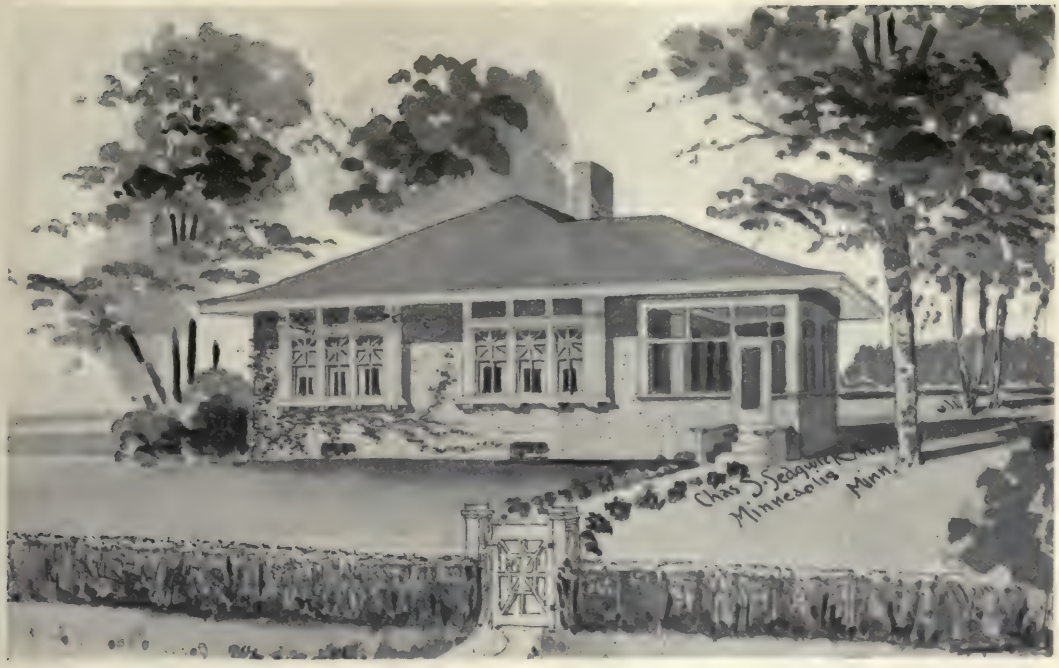


DESIGN B 353

A Substantial City Frame Residence







—Chas. S. Sedgwick, Architect.

DESIGN B 354

A Cozy Cement Cottage

Design B357.

A successful solution of the problem of small suburban and country planning is here shown. No one would ever feel it is a commonplace design, and yet it is not so unusual that it would first please and afterwards tire the eye.

The first story walls are of cement





—Keith & Whitehouse, Architects.

DESIGN B 355

A Substantial Summer Cottage

plaster which can be left in the natural gray of the cement or painted either an ivory white or straw color. The second story walls are barn boards, battened. The roof is shingled, which can be stained a moss green or a rich brown. The second story to be painted to match first story. A recess is provided in diningroom for buffet with artistic casement windows over. The livingroom and side veranda are connected by French doors. This veranda can be en-



First Floor Plan



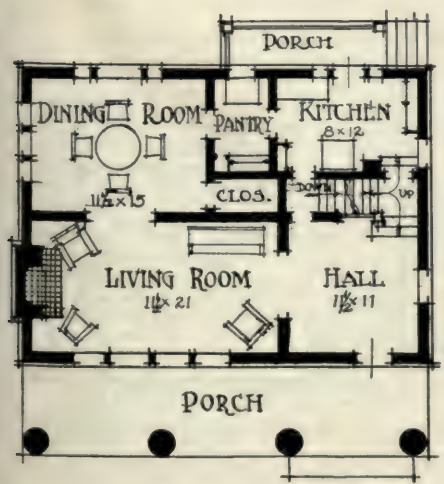
—John Henry Newson, Architect.

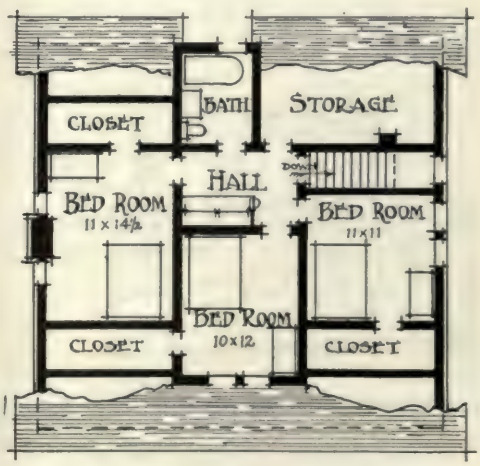
DESIGN B 356

An Irish Cottage Home

closed if desired, with glazed sash to match French doors and used during the winter months for a sun porch, miniature garden or whatever may be desired.

As the walls of the first story of this cottage are covered on the outside with heavy paper and cement plaster, the side wall, instead of being plastered in the usual way, is wainscoted up to the height of doors and windows and plastered and





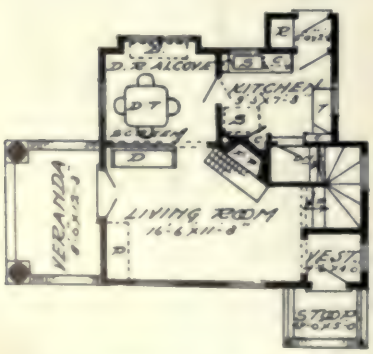


—Geo. M. Kauffman, Architect.

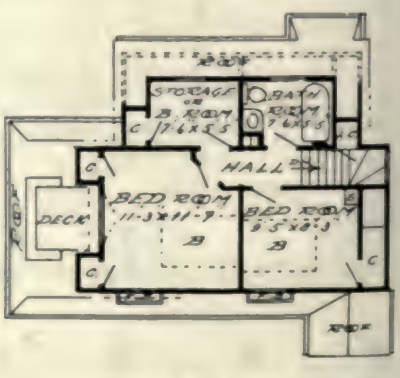
DESIGN B 357

Cottage Home Decorated with Vines

decorated only above. The principal rooms, vestibule and hall of first story, are finished in short leaf yellow pine, stained and waxed. The second story chambers and bathroom are painted. The cellar contains a laundry, coal room, toilet and cold room. The dimensions of main building are 22x22 feet 6 inches and the cost is estimated by the architect at $1,800.



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The Pros and Cons of the Plain Wall.

IT often occurs to the unprejudiced observer that people are obsessed by wall papers. The average woman thinks of papering as the only possible wall treatment, whereas quite often it is extremely undesirable for rooms like hers. As papering affords great scope for the work, and incidentally the charge, of the professional decorator, he quite naturally encourages her to paper.

Let us consider for a moment the type of room which demands the wall of more or less pattern which is supplied by papering. There is to begin with the very large room, very high, perhaps badly proportioned, and with large unbroken wall spaces. Such rooms require something to correct the defective proportions, to reduce the apparent size of the wall spaces and to remove the effect of bareness so common in very large rooms.

Then there are rooms of a formal character, halls and reception rooms, from which all the more intimate belongings are necessarily absent, where pictures may not be advisable, or their number very limited, and for rooms like these nothing takes the place of a wall paper of decorative quality.

Again, in old houses, whose walls have bulged, whose floors have settled and whose lines are generally out of plumb, a wall paper without too much pattern does much to divert attention from these irregularities. Besides this, for the very old house, wall paper has the advantage of being in harmony with the period of the house.

In all rooms of the sorts mentioned a patterned wall is advisable, and it has still another use. The flowered or chintz paper for a bedroom is admirable, as eliminating of necessity all the confusion of pictures and ornaments so out of place in a room designed for rest.

But when we have admitted the advantages of wall paper in many instances, the average room remains, the room neither very large nor very small, which is primarily a background for the family life, a life which finds expression in books and pictures and ornaments, all of which demand a setting which shall give them their highest value. For these rooms the plain wall surface of good and harmonious coloring is almost always advisable.

The plain wall has other advantages than merely as a good background for pictures. It allows of much more variety in furnishing than the patterned wall. There is a very wide range of upholstery fabrics, of which the French cotton tapestries are typical, many of them copies of antique designs, beautiful in coloring, but almost all of them with such large patterns as to be impossible in a room with a figured wall.

Another point of importance in these days when we lay so much stress upon hygienic considerations is that the plain wall is sanitary, which the papered one is not. The painted wall can be washed with an antiseptic solution. Walls covered with the various compositions can be recoated with trifling expense. Moreover, the cost of the self-colored wall is comparatively small, at least as contrasted with the price of wall paper of good quality and the expense of laying it.

Which?

Given the desirability of the plain wall, what shall it be? Shall it be painted, or shall it be of some one of the various



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compositions made for wall finishing, or shall it be merely kalsomine?

Of the three treatments, the last is the cheapest, also the least durable. Still kalsomine has greatly improved in quality of late years, and when laid upon a thoroughly cleaned wall will last for a couple of years. Anyone who can wield a brush can lay it and it is valuable as affording a means of tinting the walls of a new house, before the final finish has been decided upon. A second coat of kalsomine cannot be applied without the removal of the first coat, a dirty and troublesome process.

The painted wall is an old friend. When walls have cracked and been pointed up, the scars are concealed by paint better than by anything else. On the other hand it is never desirable to apply paint to new walls, as it is almost impossible to paint over a crack in a painted wall, as the paint changes color slightly, even in a few weeks. The most satisfactory painted wall has three thin coats of paint, and sometimes an agreeable variety and suggestion of texture is given by stippling the third coat, but this requires an unusually skillful worker. Wonderful things in this line have been done by artists, who have used different layers of color, stippling them into a sort of iridescent effect.

There is third treatment which is neither paint nor kalsomine, although applied like the latter and requiring only a single coat. This is a mineral powder which when mixed to a paste with water and applied to a surface sets like cement, giving a very hard surface, not easily broken, and which can be renewed without disturbing the original layer. The range of color is a wide one and the darker colors are quite as good as the light ones although more expensive. It is an admirable ground for stencilling, with other colors of itself.

Modifications of the One-Colored Wall.

It may be objected that, however good a background the plain wall is, large unbroken spaces above the eye line are inevitable, and not agreeable. The best answer to this objection is to recommend the use of the deep drop ceiling, thirty inches, or in an unusually high room, even three feet deep. This is a mode of treatment which is particularly good for small rooms much broken by doors and windows, in which the wall spaces are apt to appear high in proportion to their width. It introduces the principle of the broken line, always so valuable when applied to decoration.

This treatment of the deep drop ceiling is often very effective when considerable prominence is given to the separating moulding, use being made of what is known as a card rail, whose primary function is to support a line of photographs, and which occupies a place midway between the plate rails and the picture mouldings. This rail should be painted or stained to match the woodwork of the room, and an excellent treatment is to place a band of ornament just below it, either a line of stenciling or a paper border. The latter treatment is particularly good with white woodwork in a bedroom, the color and design of the border to some extent repeating that of the cretonne used for furnishings. A specially interesting treatment consists of an irregular arrangement of sprays of some trailing plant like wistaria, cut from wall paper and applied in such a way as to suggest the way in which such a vine should hang about the top of a window. Naturally, a certain amount of artistic skill is required, but not more than goes to elaborate stencilling.

When the plain wall is carried uninterruptedly to the ceiling line, it may be finished there with a very simple moulding, and a nosegay broder used to outline the surbase and the frames of doors and windows. This is an old fashion and a pretty one when the walls are not too high. It is an excellent treatment for a bedroom with old fashioned furniture.

The plain wall is also admirable with the wide landscape friezes, and enables one to balance the considerable expense of a good frieze. The tone of the wall should be the same as that predominant in the frieze, and not perceptibly lighter.

The Choice of Colors for Plain Walls.

It requires a certain discretion to decide upon the best coloring for a wall of plain surface. It must be remembered that, with an absolutely plain surface,



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color goes much further than when it is diversified by pattern or by the suggestion of texture or relief, such as is given be wall paper. A paper in three tones of red, all of them reasonably strong, may be quite agreeable, while a plain wall of the lowest of the three tones will be glaring and strong blues and greens will be absolutely hideous.

The plain wall is at its best in cool tones, gray, gray blue, gray green and greenish gray and cool fans. It is not easy to say why a painted wall in yellow or lavender is so unsatisfactory, but the reason is the same as with lavender and yellow cotton materials. The two colors seem to demand a certain richness of material. Of the warm colors, the most successful in paint or composition is one or other of the terra cotta shades. Few things are better for a hall than a wall painted terra cotta not a pink, but a red one, low in tone with a suggestion of yellow.

A Bungalow Suggestion.

This perhaps has more to do with construction than with decoration, but an extremely good panelled wall for a bungalow can be improvised from the cheap pine doors sold at the factories. The sort to get are those with panels plainly bevelled, such as are in common use in farm house bedrooms, and they are carried around the room uninterruptedly, the joinings hidden under a nailed on strip of wood. A shelf or ledge resting on turned brackets finishes the top effectively. The doors look better if they are inverted, with the smaller panels at the top. It might be possible to acquire a sufficient number of such doors for a room at one of the places where the fittings of old houses are sold, but the cost of new doors is trifling in comparison with made-to-order paneling.

The Value of Mirrors.

Mirrors are one of the most valuable assets in the fitting up of the small house or room. Not that one would advise the dotting about of endless little mirrors, for even a mirror should have some excuse for being, but the little bit of brightness can be combined with the raison d'etre in the shape of a mirrored candle sconce. Or the circular mirror in a Florentine frame can be hung at just the right height for the adjustment of veil or tie.

For the filling of a narrow space, too small for the advantageous hanging of a picture, the panel mirrors, simply framed with a French print in the upper section and a strip of mirror below are admirable, and added interest can be given to them by the removal of the commonplace portrait or scene and the insertion of a picture of more artistic merit.

An admirable way of brightening a dingy hall is to hang a mirror of good size in such a way that it reflects an adjoining room, or if this is not possible letting it reproduce an interesting group of pictures on the wall opposite to itself.

Blue Awaji.

The plain colored Japanese wares are familiar enough in yellow and green, and one sees occasional pieces in peacock blue and sang de boeuf, but steel blue is new in this ware. The surface is highly glazed and the shapes are very good. Some of it is decorated in white in the familiar cherry blossom pattern, but the plain tint is the more pleasing. It is to be had in tea services, chocolate pots, a good variety of sizes of plates, some very effective beaked jugs and in two or three styles of boxes. A piece or two would seem to be just the thing needed to accentuate some decorative schemes in blue and white. Most of the blue Japanese ware is too bright to harmonize with available cotton materials.

Paper Furnishings.

Something new, and likely to be very useful for the summer house, is waterproof crepe paper. It is our old friend, and in the same colors, but is treated by some process which gives it a waxy surface and makes it waterproof, as well as less likely to tear. In colors, it is useful for a cover for the living room table, in white it is admirable to lay on bureaus and washstands, as serviceable as oilcloth and looking much better. When it gets shabby it is easy to burn it up and take a fresh piece. It is much used by nurses in sick rooms, as more hygienic and less trouble than linen covers.



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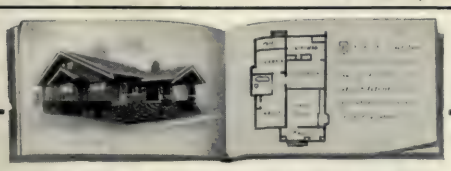
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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

W. E. K.—"I enclose sketch of floor plans of the new home I am building. Will you kindly suggest finish for interior woodwork and hardwood floors—and colors for plastered walls? Bath room floors to be tiled. Do you think it would be advisable to tile the vestibule? The veranda is to be wood.

"I wish to follow a suggestion of yours and get away from the brown stains for floors. I think I should like very much to have my living room and hall floors silver gray. If so, should my dining room be silver gray also? Would white woodwork look well with silver gray floors? In the rear end of larger hall I intend to put a large, oak, roll top desk and twenty-four sections of oak bookcases. Would silver gray woodwork harmonize with the oak? I do not think white woodwork would. Does all hard wood take the silver gray finish, and would you advise it for all my floors? Should the window sills match trim of room interior or should they match the color that outside of house will be painted?"

Ans.—We do not recall the suggestion as to floors you speak of, but it was probably given as part of some special treatment, where harmony in everything was made a study. For instance, with light gray painted woodwork in a bedroom, a gray floor would be pleasing, or with gray stained hardwood; but we should not advise it for a whole house.

If your woodwork is to be white and the living room is to be used more as a parlor, then silver gray walls with paneled effects in blue and silver and furniture upholstered in gray fabrics with some blue, in such a scheme the silver gray floor would be delightful. But if it is to be a real living room it must have a more substantial treatment.

The oak bookcases and roll top desk will be quite incongruous with white woodwork and gray floor. If these must be a part of the hall, then we should advise an oak finish in hall with brown stained floors, as a break in the finish of the floors between hall and living room would not be advisable. This would necessitate a brown stain for the living room floor also, although the white woodwork would still be all right. In this case a grayish green wall would be best.

In the dining room, if mahogany furniture is used, then the silver gray stain on the floor would be admissible, but not with oak furniture.

It is impossible to give more definite advice under the uncertain conditions.

A tile floor is always good in a vestibule and does not depend on the character of the veranda floor.

The window sills on the inside should match the interior woodwork, outside the glass they should match the trim of the house.

S. O. C.—"The enclosed rough sketch shows the floor plans of a little house I am remodeling. Will you please suggest a decorative scheme for it?

"The hall, parlor, living room and dining room are to be finished in oak and the rooms of the second floor in yellow pine. All floors are to be maple. Furniture is mission in a dark, I think, weathered oak, and golden oak."

Ans.—Inasmuch as the rooms are small with low ceilings, the same finish should be used on the woodwork and variations of one neutral color tone upon the walls. As the furniture is to be all in brown oak, this compels the use of a brown stain for the woodwork.

The rooms would be much helped by cutting a wide opening from living room into front part of hall, and the walls should then have the same paper. A



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neutral putty gray in a self-toned, blended design, is suggested for this. The parlor could have a rather more decorative paper, but still keeping to gray tones.

In the dining room facing north, warmer tones should be used, golden tan, dull yellows, etc.

In the Decoration Department of the November Keith's are very helpful remarks on the use of neutral tones for small rooms and also on combining color with brown tones.

The maple floors are rather too light a tone to harmonize well with the finish and furniture. They should be of oak or at least birch. It is almost impossible to get a brown stain into maple.

L. M.—"I am enclosing stamped envelope and will thank you to offer your suggestions to my proposed redecoration of a bed room and library.

"Both rooms are 12x15, one over the other and facing north and west with two 24x32 2-light windows on each of these two sides. In the bedroom, we have light oak furniture and a blue and white Brussels rug 9x12. I intended to paint or enamel the woodwork white or ivory, use a light blue striped paper on the walls and cover the floor with a blue and white diamond pattern linoleum, so as to provide a proper background for the rug. For curtains we have white Irish point lace, and what color shades would be best, we have dark green now. Is this combination all right and will the oak furniture look all right with this color?

"I want to furnish the library with mission furniture in either the fumed, weathered, or nut brown finish, we have a rug in deep red, tans and blue which goes very good with the dark red and black paper on the lower portion of the walls and tans for the top one-third, but the woodwork is soft pine, and what can I do with it to make it harmonize with the mission furniture in its dark dull finishes. It is painted now in a manner intended to look like oak, but is decided yellow. This floor is oak.

"What kind of curtains look best with mission furniture?"

Ans.—It is unfortunate that you should have a blue and white Brussels rug for a north room and the light oak furniture. Such conditions would better accord with tans and browns, but if the blue must be used, try in every way to make the coloring soft and dull. Such a light blue and white stripe as you propose for wall would only make things worse. We should use instead one of the mixed-up new Chintz stripe in a soft ecru, having a little blue in the figure, and paint the woodwork pale ecru instead of white. Do not think of using blue and white linoleum on the floor, but get a plain nap matting in a sort of greenish grayish white. In these ways you will tone down the blue and white rug.

Banish the Irish point lace to the attic, or else use it in the library below, covering it all up except the lace edge with over draperies of some pretty brown. For the bedroom curtains use a soft ecru cross barred crim.

Do not have any division of the wall in the library below. Paper it all over with one of the imitation grass cloths in tans and browns with dash of red with ecru ceiling. Paint the woodwork a nut brown. Then your fumed or weathered oak furniture will have a suitable background.

Mrs. A. J. S.—"We are about to build a bungalow and would like suggestions concerning treatment of floors, woodwork, walls and windows.

"Our living room furniture is early English, piano ebony (miniature grand) rug tan and green with some black, and white net curtains that could be tinted ecru. The dining room furniture is golden oak. The rug is tan with red and green—small pattern. Would you advise casement windows for this room?

"We had thought of white enamel woodwork with mahoganized doors for bedrooms and bath. Would you advise something else? We have an old fashioned walnut bed. Could we use that if it were done over in a soft dull finish? What style of dresser would you suggest? We also have a white iron bed and golden oak dressing table. Can we use these in the small bedroom?

"What do you think of rough cypress stained brown for outside? Would you use white trim?"

F. P. S.—The rough cypress you mention is very attractive for a bungalow exterior. If stained brown either a cream

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ANSWERS TO QUESTIONS—Continued

or a white trim would be good. Oak is rather an expensive finish for the interior woodwork of such a bungalow. Cypress or fir or ash would be more in keeping.

One of the soft brown stains would be best for all the rooms except the bedrooms and bath. Send for booklets showing these stains in color, from the different advertisers in this magazine, and select what harmonizes best with the finish of your living room furniture. The living room is too narrow for the length. Yes, casement windows would be very attractive in the dining room. The white net curtains should be tinted ecru.

We should not advise mahogany doors in the bedrooms. The style of the house does not warrant such a formal treatment. Paint the doors white like the woodwork. The walnut bed would be very good indeed if done over, and we should try very hard to find an old fashioned walnut dresser to go with it. If this is impossible, you can have dresser finished with a walnut stain. But the antique style is what you want.

As this furniture will be in a north room, we would do the wall in one of the pretty light Chintz stripe papers, with sprigs of thin old fashioned flowers scattered over it, and a white ceiling, using also a similar Chintz for curtains, etc.

The golden oak dresser and white iron bed will make the room look very ordinary. Have the courage to paint both bed and dresser a soft pretty leaf green. Do the walls in a narrow green and yellow striped paper and put a green rug on the floor. Have yellow and white curtains. It will be a pretty room then.

N. H.—"My bungalow will have a southeast front.

Have a walnut piano and music cabinet to use in living room. Shall have round table and chairs of oak in dining room. Sliding doors between the two rooms.

Kindly suggest color of rugs, paper and woodwork in these two rooms, and what kind of furniture to use with piano in living room.

Shall also use rug in one of the chambers and cover floor of other chamber with white matting.

Bungalow will be built in small country town. Would you have exterior painted ivory with white trim, or brown with white trim, and what color would you suggest for the roof?"

Ans.—Taking up first the question of the exterior, it is suggested to stain main walls of bungalow a cigar brown with white trim and white or silver gray asbestos roof. The light roof is said to be far more effective than a dark one in keeping out heat.

Fumed oak wood-dye would be a good choice for interior wood trim of two main rooms. It would tone in well with the walnut furniture. We should used fumed oak for the other pieces in living room, and two or three pieces of brown wicker would work in admirably if upholstered in the colors of the room, either with English imported cretonne or an inexpensive tapestry.

The imitation gray cloth paper in mixed tone of brown gray, would make an agreeable wall surface in living room with the rug and furniture coverings in green. As the dining room is an east room, warm but light tan wall, with rug in tans and browns and touch of soft old reds carried into the colors of a frieze would open agreeably with the living room in browns and greens.

There are many charming bedroom papers, simple and inexpensive. Some of these are illustrated in April Keith's. The new narrow blended stripes in pink and gray with frieze to match are very desirable, with white woodwork.

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Great Britain:
4 Southampton Row, Russell Sq., London

The illustration which forms the left-hand position of this advertisement gives a glimpse into the beautiful Beaver Board dining-room of Joseph Reed, Esq., Vandalia, Ill.



The Business of Housekeeping.

IT is a truism to say that housekeeping should be made a business, and administered as would be the concerns of a factory or an office, but it is a truism which will bear repeating. Until this idea is grasped, the housewife, with the best intentions in the world, is little more than an amateur.

The Essentials of Successful Business.

A good business man is one who has a keen appreciation of the best means by which definite ends are attained, who is willing to avail himself of new methods, who has an accurate sense of values, and is systematic in keeping accounts.

The Financial Basis.

At the basis of every business is the expense account. How much may I spend and upon what income can I count? Successful housekeeping must be conducted upon the basis of a definite allowance. The housewife may handle this money or she may not. Her bills may be paid, and only the smallest sums pass directly through her hands, but she must spend with the idea of a limit which must not be exceeded before her. The whole sum available must be properly apportioned between the various needs, so much for rent, so much for food, so much for fuel, so much for clothing, etc. Moreover, her budget must include an allowance not only for daily expenses, but also for household wear and tear and for possible emergencies.

The household budget is only properly made up after much experiment, after expenses have been carefully recorded and compared. Some system of household bookkeeping is absolutely essential.

Accounts must be kept with absolute accuracy, as simply as is consistent with clearness, and written up daily while all the items are fresh in the mind. Some people find a book desirable, others use some variation of the card index system. Housekeeping books, printed for closely itemized entries, can be obtained. The mode is not essential, the account is.

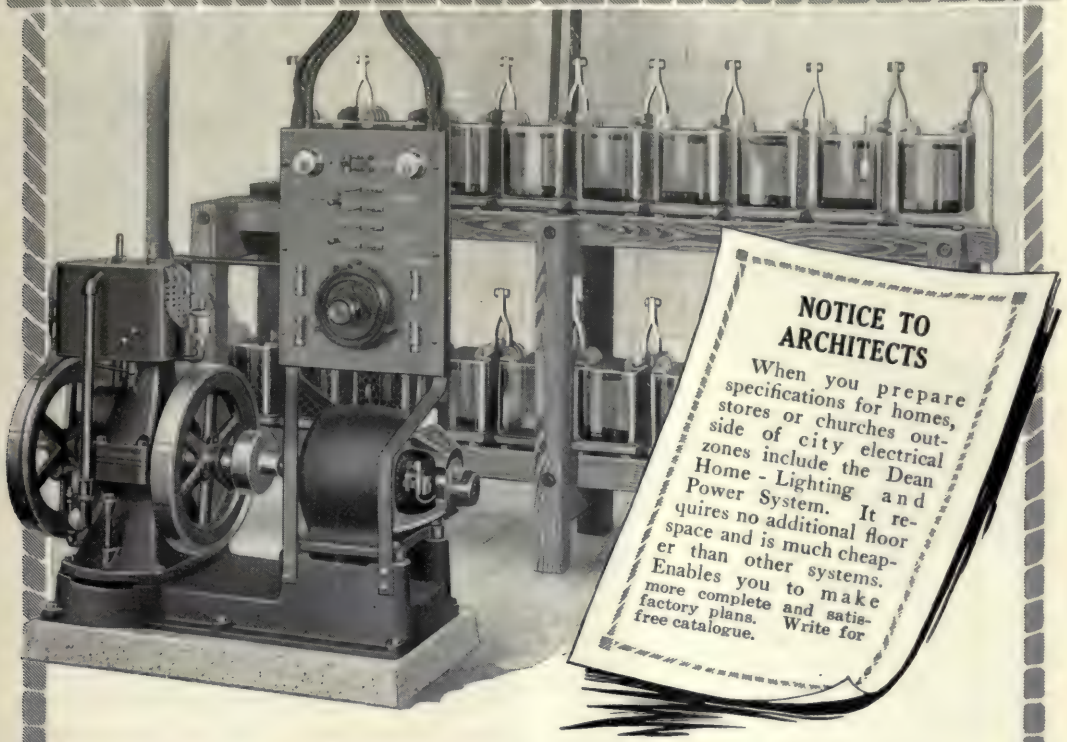
When the proportion of the expenditures for the various items has been decided upon, the allowance should be divided accordingly and the several amounts placed in separate envelopes. If it becomes necessary to borrow from one fund for the benefit of another, the transaction must be recorded by a credit slip, placed in the envelope of that fund.

When the allowance is not a cash one, the envelope system is still a valuable one, but the envelopes will hold not money but the memoranda of items of expenditure, properly classified, and cleared out at the end of the month when the bills are paid.

Bills must be filed as received, and all slips received with delivered goods kept until the end of the month or the payment of the bill of which they form a part. Receipted bills should also be kept, not only as a security against paying twice over, but as a means of comparison between the expenses of different years.

Purchasing Supplies.

An important part of any business is purchasing supplies to the best advantage. A shoe factory would have to close its doors if it bought leather as care-



You can have all the electrical comforts and conveniences of the city, "no matter where you live," if you install in your home a

Dean Electric Company's Home-Lighting & Power System

This system is more than an ideal source of illumination and may be used to operate pumps, sewing machines, washing machines, fans, vacuum cleaners, electric flat irons, heating pads and similar home conveniences.

The Dean plant is not an experiment but has been perfected in every detail. The Dean system should not be confounded with the systems that are merely an assembly of engine, battery and dynamo, put together to sell for a profit. It is ***practical, economical, easy to install*** and requires little attention.

THE DEAN ELECTRIC COMPANY

1012 Olive Street, ELYRIA, OHIO

Manufacturers of Electrical Apparatus, Power and Switch Boards

"Look for Dean where Quality's seen"

lessly as the average house does its supplies. Nor does a business concern buy hand to mouth, just for the day's needs. In store or factory the heads of stock know the exact quantity of material on hand, just how long it will last, and just where it is to be replenished.

Two elements must be considered in the actual marketing, quantity and quality. The person who markets must know the exact quantity of each article required, so that there may be enough but no waste. She should know exactly how far a pound of a particular cut of meat will go, how many persons a quart of vegetables will serve. If it is not expedient to buy the exact quantity needed, the purchase should allow for an economical use of what is left from the first serving.

As to quality, one must know the tests for meats, vegetables, fruit and eggs well enough to judge of the articles offered for sale by their appearance. A knowledge of desirable brands of cereals and canned goods is a good thing to have, and it is the safest way to confine one's self to the output of some well known firm, which cannot risk its reputation by selling inferior goods. And involved in the matter of quality is the matter of the nutritive values of various articles of food, and of the method of making up a "balanced ration."

Buying in Quantities.

Here is the parting of the ways between the factory and the house. In cities at least the average house has almost no room for storage, while living in an apartment makes the hand to mouth system the only possible one. For the average family about the only sort of buying in quantities is the purchase of canned goods by the case. But the barrel of potatoes or apples means much actual loss, as well as the possibility of using food which has begun to decay. Oil by the quart can, however, vinegar by the gallon, flour by the bag, five pounds at a time of the common cereals; these are possible purchases for the smallest household.

And apropos of package goods, the Housewives' League, of New York, whose timely boycott brought down the price of butter during the past winter, has declared war upon the buying of cereals in packages, as a very great extravagance. Concrete examples are given in which the attractive label and neat carton have multiplied the price of a cereal by three.

Mechanical Appliances.

The factory is always on the lookout for new mechanical devices. The store installs the cash register and the pneumatic tube. The office is dependent upon the typewriter and the adding machine. A certain amount of apparatus is desirable in the house. There is this difference. In the place of business the use of the mechanical device is sufficiently constant to effect a real saving in the help employed, and to pay for the machine many times over. Moreover in the factory one person uses one machine all the time and becomes expert with it. In the house the use of the washing machine, or the vacuum cleaner, or the mangle is intermittent, and it is used by a person who has a great many other processes to undertake. If she is a servant she is quite likely to have a prejudice against the appliance and to use it to poor advantage. Moreover while these mechanical appliances make certain processes easier, that very fact tends to complicate the standard of living of the family. Old people tell us that the sewing machine inaugurated a carnival of elaboration in the trimming of clothes, while simplicity was the rule when every stitch must be set by hand.

There is another point to be considered in connection with the use of the various household appliances. What is to become of the unfortunate woman who must work out by the day, when everyone cleans her own house and mangles her own clothes and cleanses them by the turning of a crank? Is it for the good of the community that all the women who must do manual labor should be driven into factories? But let us not worry. The average woman is not logical, and she will never carry the parallel between the household and the place of business so far that there will not be many saving loopholes.

MAJESTIC
FOUNDATION
COAL CHUTE



¶ Protects the building just where most needed — above the opening ¶ The heavy steel hopper catches all the coal.



¶ When not in use, the hopper lies in the bottom of the chute body ¶ The door locks automatically either open or closed Strictly burglar-proof ¶ With ¼ inch wire glass or steel panel in door

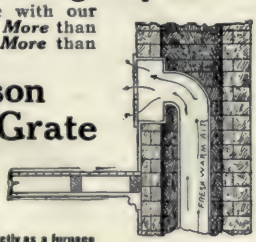
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MAJESTIC FURNACE CO
88-98 Erie St Huntington, Indiana

Gain Comfort, Secure Health and Economize Heating Expense

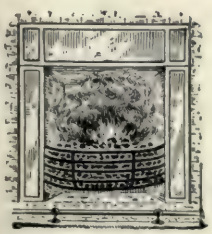
by warming your home with our open grate fire that does *More* than look bright and warms *More* than one room.

The Jackson Ventilating Grate

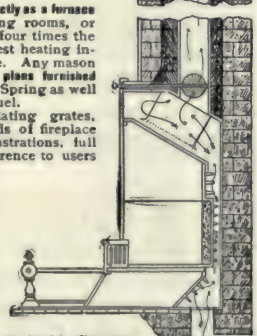


does all these things, and **More.** It draws in fresh air from outside, warms it by circulating it around the fire in a warming chamber and then pours it out into the room thru the register over the arch, **just exactly as a furnace does.** It warms several connecting rooms, or other rooms upstairs, furnishing four times the heat from the same fuel. The best heating investment for a cheer-loving home. Any mason can set it up from our **complete plans furnished Free.** Heats the house in Fall or Spring as well as a furnace with about half the fuel.

Send for Free Catalog of ventilating grates, mantels, andirons, and all kinds of fireplace fixtures, with explanations, illustrations, full information and prices; also reference to users in your region.



Many styles of grate and Mantels to choose from.



Study this diagram and you will see at once the heating and ventilating principle which makes this grate superior to all others.

EDWIN A. JACKSON & BRO.
MANUFACTURERS
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FOR $880 We furnish complete all lumber, millwork hardware, spouting, paint—everything except masonry and labor. **A101.**



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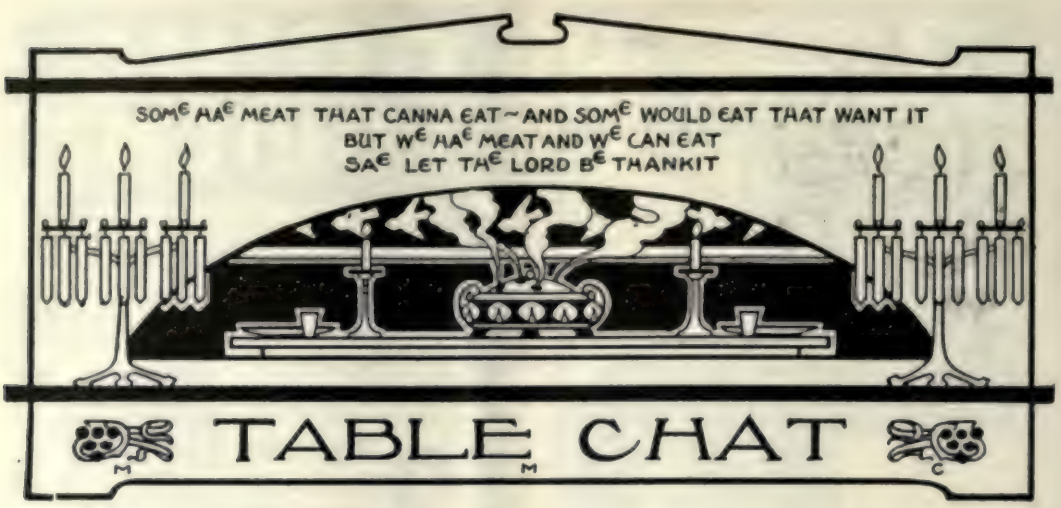
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CATALOG No. 33. Building Materials
PLAN BOOK—No. 43. House and Barn Plans



For the July Breakfast Table

By Beatrice D'Emo



CHILLED AND MOLDED OATMEAL SERVED WITH STRAWBERRIES.

WHEN the warm days of summer bring with them capriciousness of appetite, and steaks, chops and cutlets, which have been the principal items on the winter bill of fare, grow appallingly heavy to the imagination, then is the time for the serving of light and dainty dishes, which are also nourishing and good to look upon as well as to eat. For the housewife who is sometimes at a loss as to what to present at the first meal of the day that will be both acceptable and novel, four menus are here given, the combination being arranged with reference to nourishment and flavor without extravagant outlay of either money or time; also the ingredients are obtainable in almost any locality.

Fruit served for breakfast should be in its natural state as far as possible, and very little sugar, if any, taken with it, although fresh pineapple and grape-fruit require just a dusting with powdered sugar to make them acceptable to most palates, but any variety should be as cold as may be without actually freezing. This temperature can be gained by leaving the fruit in the lower part of the ice chest over night, but do not bring it in contact

HEISEY'S (H) GLASSWARE



(H) ON EVERY PIECE



333-FINGER BOWL PLATE AND VIOLET HOLDER

Every glass essential for the well-appointed table is to be found in Heisey's (H) Glassware. This sparkling, clear-as-crystal glassware is low priced enough for every day use. It is for sale only by the best crockery and department stores.

Our free "Handbook for the Hostess" is worth writing for.

A. H. Heisey & Co. Dept 72. Newark, Ohio

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MERIDEN BRITANNIA COMPANY

OLD COLONY PATTERN

Spoons, Forks, Knives, etc., of the highest grade carry the above trade mark.



"Silver Plate that Wears"

Guaranteed by the largest makers of silverware.

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NEW YORK CHICAGO SAN FRANCISCO

Send for catalogue "F-35."

Kraft Ko-na Cloth

Novel texture, durable, sun-proof—this newest Wiggin Creation is distinctive for unique, effective wall decoration. Kraft Ko-Na is of the famous

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line of highest grade woven wall coverings, which include Art Ko-Na, Kord Ko-Na, etc., and the finest quality Fast Color Burlaps. Send for booklet of samples mentioning goods desired.

WE LEAVE IT TO THE SUN

H. B. WIGGIN'S SONS CO., 214 Arch St., Bloomfield, N. J.

This Trade Mark on back of every yard. Patent applied for.

The Highest Ideal ever attained in a woven wall fabric

with the ice or the flavor will be impaired. Wheat, oatmeal and cornmeal mush are any one of them delicious served cold, the cooking being done the day before, then the cereal poured into either one large or several small molds and chilled overnight. Any of the small fruits can be served raw with the cold cereal, or dates, raisins or prunes can be chopped and added to it just after it has been cooked and while it is still hot. When preparing cornmeal mush always stir the meal to a paste with cold milk or water before putting it in the boiling water. Three tablespoonfuls of almost any cereal requiring cooking added to three cupfuls of boiling water makes sufficient for three people, unless they have unusually hearty appetites.

For the most appetizing toast the bread is cut half an inch thick and the crusts trimmed off, to use later for bread pudding. Toast quickly on both sides and butter; the slices should be piled one on top of the other and a cover put over the plate, which will keep the toast soft until wanted.

The item of meat is almost a superfluity in a summer breakfast, but the touch of fresh green, supplied by radishes, young onions, water cress and cucumbers is a necessity, the appetite seeming to crave something of the kind as soon as warm weather begins. Watercress should be separated in stalks—it is usually sold tied in tight little bunches—and put in very cold water to which a little salt has been added, to soak for ten or fifteen minutes then looked over carefully that no minute water insect retain lodgment in the crisp, green leaves. Shake free from the water and pile lightly in a glass dish, for a centerpiece to the meal.



THE TOUCH OF FRESH GREEN IN THIS ARRANGEMENT OF RADISHES AND CUCUMBERS.

Two ways of making radishes decorative are pictured. Use the spherical firm, red kind and trim off the roots, cutting the tops so that a little handle of green stalks remain on each. Wash well, then peel a band about each, leaving a line of white between the red. Or, with a small knife turn back the peel from the root end in leaf-like sections, leaving a bit at the end for a center. Put a butter plate with salt on it at each place when radishes are served and put the radishes themselves on a bed of cracked ice.

KEITH'S PRACTICAL HAND BOOK "The Building of It"
Is a valuable guide which every owner should carry with him on the job. Illustrated with cuts showing correct construction. Tells how to avoid mistakes. $1. postpaid. M. L. KEITH, 426 McKnight Bldg., MINNEAPOLIS

The Home of Wholesome Food



1¼ inch Thick—Round Corners

A Snow-White Solid Porcelain Compartment

It does away with cracks, joints, crevices, corners and other natural hiding places for dirt, odors, decaying food and dangerous microbes found in other refrigerators—the one *really sanitary* food compartment.

The "Monroe"

A Lifetime Refrigerator

Send for Our Free Book on Home Refrigeration

It tells you how to keep your food sweet and wholesome—how to cut down ice bills—what to seek and what to avoid in buying *any* refrigerator. It is packed with money-saving hints, and every housewife and home owner should have one. It tells all about the "MONROE"—describes its wonderful lining and the many other grand features that have given this refrigerator its position as the world's best.



SOLD DIRECT

30 Days Trial—Credit Terms Extended

The "MONROE" is sold direct to you—at factory prices—on 30 days' trial. We pay the freight and guarantee "full satisfaction or money back." *Liberal credit terms if not convenient to pay cash.*

The "MONROE" is the **ONE REFRIGERATOR** with each food compartment made of a solid piece of unbreakable snow-white porcelain ware with every corner rounded as shown in above cut. The **ONE REFRIGERATOR** accepted in the best homes and leading hospitals. The **ONE REFRIGERATOR** that can be sterilized and made germlessly clean by simply wiping out with a damp cloth. The **ONE REFRIGERATOR** that will pay for itself many times over in a saving on ice bills, food waste and repairs. The **ONE REFRIGERATOR** with no single point neglected in its construction, and suitable to grace the most elaborate surroundings.

MONROE REFRIGERATOR COMPANY

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OUR BOOKLET ON

Pergolas and Garden Accessories

Might be of some interest to you

Send for Catalog G-27.

Our designing department is at your disposal to advise and assist in developing a pergola feature for the garden. Upon application we will submit you a sketch of a pergola to suit the space that you might select for it, and with it the cost of furnishing the same ready to set in place. We invite correspondence.

HARTMANN-SANDERS CO.

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Elston and Webster Avenues, CHICAGO
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High Grade Mantels and Fireplaces



Our line of Colonial, Mission and Standard Mantels is the most complete in the country, All goods are guaranteed as to quality. Our large new catalogue, showing also brick mantels and a large selection of fireplace fixtures, consoles, colonnades, etc., sent free on request.

If building or remodeling be sure and write us.

CHAS. F. LORENZEN & CO.

701 N. Sangamon St., CHICAGO, ILL.



CONTRACTORS are finding that they must be prepared to build hollow-tile floors and walls if they would keep "up to date," for house owners now frequently demand this form of construction. Many contractors who start in with their first hollow tile job somewhat diffidently, through lack of experience, become specialists thereafter, when they discover how easily tile is handled and with what excellent results. The first job of hollow tile undertaken by a contractor should be carefully watched. His reputation will rest upon this first job, which, if well executed, is bound to bring him more work in the same line.

Hollow tile floors require no more care to lay than floors with ordinary wooden joists. Mason contractors, of course, like them better, as they increase the field of their operations. In a hollow tile house, when wood floor construction is used, the latter is part of the carpenter's contract, but when hollow tile floors are used they are part of the mason's contract, thus enlarging the mason's operations and increasing his profit. In building the scaffolding for a hollow tile floor care should be taken to have it level and solid enough to carry the weight of the hollow tile. Scaffolding lumber can be used over and over again, if it is dismantled carefully. Concrete girders are made by building troughs of boards, afterwards filled with concrete, reinforced by rods. Ordinary care is sufficient for all this work, which is not difficult, merely requiring the same amount of supervision as any first-class job.—Building Progress.

Gives Longer Life To Concrete.

Process of Making Dense Reinforcement Produces Best Results.

On the controverted question of the life of steel embedded in concrete, instructive light is thrown by the electrolytic theory of corrosion, says a contractor. According to this theory, iron can pass into solution only when an equivalent amount of hydrogen passes from the ionic to the gaseous state; and if the hydrogen concentration is reduced, the rusting of the iron will be diminished. This is achieved by adding a strong alkali to the water which is in contact with the steel. The caustic lime given off by Portland cement in setting and hardening has this action, and iron or steel embedded in concrete will not rust so long as this caustic lime is present. Unfortunately it is soluble in water; and it is therefore desirable to make the concrete containing steel reinforcement very dense since by so doing the protective properties of the concrete will be maintained for the longest time.

Repairing Concrete Floors.

There is a popular and widespread fallacy to the effect that a concrete floor once chipped or cracked is practically at the end of its usefulness. This is undoubtedly due to the results of unskilled workmen attempting to repair a damaged floor. Unless proper care is taken and the workman engaged on the job has sufficient knowledge of concrete, a repair job is most unsatisfactory.

In this connection, says "Concrete," the practice of a Boston firm is worth noting. In certain of the concrete buildings erected by this firm floors have been chipped in particular places because of some phase of the industry which gave rise to dropping heavy materials in one place, as, for example, the winding rolls in a paper mill. When a floor has become chipped out in some such manner as this, the proper method of repairing is to chip out with mallet and chisel a recess usually square, of sufficient depth



Mississippi State Hospital at Jackson, Miss. Roofed with Asbestos "Century" Shingles by the Hospital authorities on the advice of J. T. Willis, Architect and Builder, of Jackson. From an Artist's Drawing.

SO many requests have come to us for a *red* Asbestos "Century" Shingle that could be supplied at a lower price than the solid red shingles—that we are now producing *Veneered Red*

Asbestos "Century" Shingles

"The Roof that Outlives the Building"

These veneered shingles are made of the standard "Century" asbestos-cement composition—and by the "Century" process, controlled exclusively by this Company.

Their upper weather surface is Indian Red, backed with the regular Newport Gray composition.

They have all the fire-proof, weather-proof and time-resisting qualities that have given Asbestos "Century" Shingles their superior place among roofing materials.

They cost very little more than the Newport Gray Shingles.

Ask your responsible roofer or architect and *write us* for booklet, "Roofing: A Practical Talk;" *full of valuable information* for the man with a building to be roofed.

Keasbey & Mattison Company

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Dept. G, Ambler, Pennsylvania

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to reach to the bottom of the deepest break in the concrete surface. The rough surface resulting from this process is then treated with acid to bring out the solid aggregate, or else a stiff brush is used to remove all the loose dust, and the recess washed out by sluicing out with a hose. When all the dust particles have been removed the recess is grouted with cement and before this has set the granolithic finish is applied and leveled up with the rest of the floor. Repairs made in this manner are just as permanent as the remainder of the floor, as the bond between the new and the old concrete will be perfect if all the loose material has been carefully removed.—National Builder.

The value of concrete in greenhouse construction is becoming generally recognized. The most enduring of wood lumber used in bench construction lasts but a very short time under the influences of decay which are constantly at work in the moist condition of a greenhouse. Greenhouse benches are now being made of concrete lumber and are proving very satisfactory, as they are not particularly expensive, are readily constructed and may be expected to last indefinitely.

Wall Moisture Proof.

Does a solid concrete wall for a dwelling house absorb moisture? In other words, is such a wall for a dwelling house unhealthful? I should like to know whether or not it is necessary to have an air space in a concrete wall for a dwelling house, or can a good wall be built of concrete block which have hollow cores so that the air space in the wall is not continuous? E., New York.

It is commonly known that absorption tests on clay brick run from 10 per cent up. The conditions under which concrete is made in bulk form on the ground, however, make it more difficult to secure a very dense wall—not by any means impossible but more difficult—so that in practice solid walls will absorb more moisture than concrete block which are properly made and cured under factory conditions.

Concrete hears very frequently of dwelling houses built of concrete block in which the interior plastering is done direct on the block walls, and in which no moisture penetrates. Hollow walls are to be recommended, however, because the dead air space supplies an insulation which not only keeps moisture from coming through, but which keeps cold out in winter and the heat out in summer. So we say that the more hollow space in the wall, the better is the wall from this viewpoint, and that if a double concrete wall is built so that the air space is continuous all around and up and down, such construction is ideal. —Concrete.

Metal Roofing as an Insurance Policy.

Coincident with the bumper cotton crop is a growing demand for metal roofing. The protective feature of the metal roof is becoming more manifest to those who own their own homes. The wide-awake farmer or landlord of today appreciates that metal roofs are a good sort of insurance policy against fire and other minor troubles with which all who live under shingle roofs are conversant. Rates for insurance are lower, too, on metal covered dwellings.

A good metal roof is recognized as leak-proof, wind-proof, rust-proof and last but by no means least, fire-proof. Those having metal roofs, metal shingles or metal siding on their homes or barns, and whose abode is miles from the nearest fire fighting apparatus, feel secure to know they are at least better protected from that source of alarm which gives more trouble in the country than any other, destructive fires, than they would be if they had not protected themselves by using metal.

Throughout the southern states, statistics show that about 42 per cent. of the fires start in the roof, which is a strong argument for the use of the metal shingle. During the past ten years, many metal workers throughout that section of the country have been kept busy replacing the old wooden shingle with the modern metal type, and it is felt that there is good business ahead for the sheet-metal roofer who is sufficiently energetic to place before his customers the merits of metal roofing as a fire protective material.

J-M Asbestos Stucco



Residence of Mr. J. S. Stehlin, Long Beach, L. I. Covered with J-M Asbestos Stucco. Kirby, Pettit & Green, Architects, New York.

J-M Asbestos Stucco is composed of pure, ground asbestos fibrous rock. The sharp granules of rock and the mass of short asbestos fibres produce a weather-proof, fireproof and practically indestructible exterior covering.

J-M Asbestos Stucco combines toughness with solidity. It will not chip or crumble. Water or the most severe weather conditions do not affect it. Water will not damage it, even if applied when it is heated by flames from adjacent buildings.

It dries with a pleasing gray-white effect and does not tarnish or discolor with age.

The covering capacity of J-M Asbestos Stucco is greater than that of any other exterior plaster or stucco. Weighs considerably less than ordinary cement mortar. Its lightness facilitates the application and often saves as high as 15 per cent. in labor.

Write our nearest Branch for Illustrated Booklet

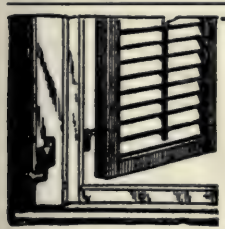
H. W. JOHNS-MANVILLE CO.

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MALLORY'S Standard Shutter Worker

The only practical device to open and close the Shutters without raising windows or disturbing screens.

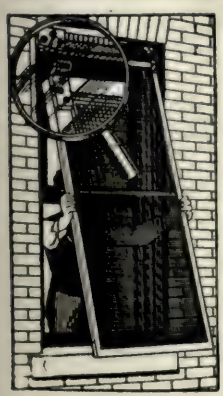
Can be applied to old or new houses, whether brick, stone or frame, and will hold the blind firm in any position.

Perfectly burglar proof.

Send for Illustrated Circular if your hardware dealer does not keep them, to

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251 Main Street Flemington, New Jersey, U. S A.



The ONLY WAY is the PHENIX WAY.

Screens and Storm Sash are as easily hung or removed from inside as you would hang a picture

Hangers only, retail at 10c

Hangers and Fasteners retail at 15c and 25c

Our Specialties: Rust Proof Fly Screens for Good Buildings.

For Descriptive Catalogue address

PHENIX MFG. CO.

048 Center St. Milwaukee, Wis.

Properly Hung Doors

are an essential

of the Perfect Home



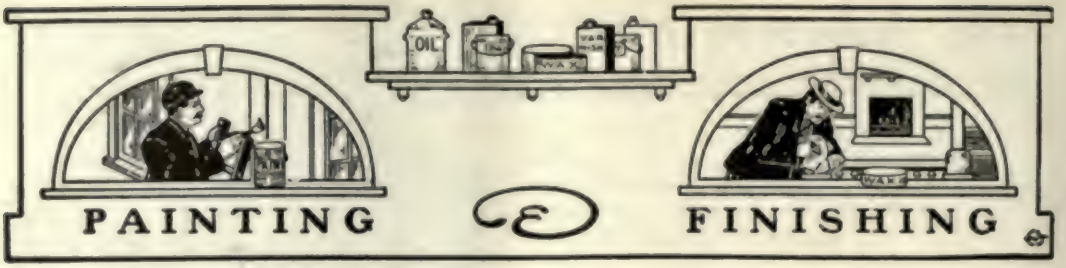
Stanley's Ball Bearing Hinges

Prevent creaking and binding.
They are equipped with

NON RISING PINS

Which never work out of the Joint. If you want to know more, write for our Artistic Booklet to Dep't T.

The STANLEY WORKS, New Britain, Conn.



Paint and Varnish Removers.

A LADY the other day told the writer that she was refinishing her house, which has been standing some time, and she said that the painter had accomplished the most wonderful transformation on the interior doors. She said that he had used some kind of a chemical (which was one of the neutral removers), and had removed the old paint down to the wood, and that they found very beautiful oak doors which had been ruined by having been painted over, and she said that when these had been refinished they were perfectly beautiful and she was very much pleased with the entire job. It pays a painter to do work of this kind. When figuring on a painting job, most people look to the expense first, but if it is pointed out to them that at a little higher price a much better and more satisfactory job can be done, almost every customer will be glad to pay the difference.

If the dealer has a great deal of trade with amateurs who do their own painting, etc., it would pay him to point out to these customers that paint removers can be used for taking off old varnish from floors and restoring them to practically a new condition; that paint remover can also be used in taking off the old finish from old furniture, tables that have been spotted, old doors, stairways, picture frames, etc., etc., and that by using prepared paints or varnishes the amateur can do a very good job of refinishing, if the old finish has first been removed clean to the wood.

Shellac Substitute for Floors.

A correspondent wants to know whether imitation shellac is as good as the genuine shellac varnish for floors, to which we reply that it is not, it will not give the same wear. A floor finisher tells me that once he was required by an architect to use a certain substitute shellac on a floor, and in six months the floor was nearly bare, only some spots being left uncovered, and there only imperfectly.—American Paint and Oil Dealer.

How to Remove Paint From Tiles.

There is nothing more unsightly than spots and splashes of paint left on the floors and tiles of buildings. Most tiles will allow a wash of caustic soda being put over them, which will remove the paint without the necessity of using an after wash of acid to destroy the effects of the potash, water only being required, says Modern Building. But if the tile is likely to stain with the potash, a wash of diluted ammonia will remove the paint spots, in turn can be washed off with clean water.

A law passed by Congress compelling property owners to paint every wooden, steel or iron building immediately upon its erection, and to repaint it at least every five years, might be considered by some as a hardship, yet such a law would enforce the greatest national economy ever proposed, one beside which disarmament itself would seem insignificant so far as the saving of dollars alone.

Such a law would save property owners in America hundreds of millions of dollars annually, and the cost would actually be about one-third of the present cost of repairs to unpainted structures caused by rotting, rusting and general wear and tear. Statistics prove that in all sections of the United States less than 25 per cent of the houses are painted. This is largely due to ignorance. Most people paint for the sole purpose of appearance, though that should be the last reason for using paint.

It costs three times as much not to paint as it does to paint. The cost of

Dutch Boy Painter Stencils

We have issued an attractive catalogue called The Dutch Boy Painter Stencil Book showing over one hundred different stencil designs, with the number, size and price of each, which we are offering to house-owners and prospective house-owners at less than the cost of cutting and designing. Our stencil book also contains four colored plates showing interiors harmoniously decorated and tastefully stencilled.



Ask your painter to mix the paint for your house on the premises and see that he uses not only white lead but also linseed oil bearing the Dutch Boy Painter trade-mark. It is a mark of purity and insures a beautiful and durable finish for both interior and exterior painting.

We make this special stencil offer so that in connection with the best paint for interior as well as outside painting—Dutch Boy Painter white lead and Dutch Boy Painter linseed oil—you may also have the best stencils.

The stencil reproduced above is representative of those shown in our catalogue and is, as you can see, a big departure from the commonplace ones which are so often seen. Our object is to give you something simple, embodying at the same time *distinctiveness.*

The possibilities for artistic decoration with stencils of this kind are unlimited and any variety of effects may be obtained with the same stencil.

Write for the Dutch Boy Painter Stencil Book today. It is free for the asking. Use the attached coupon. To those sending it in properly filled out we offer any of the stencils shown in our catalog at one-half the price named.

K. E.

National Lead Co.,
111 Broadway, New York.

Gentlemen:—
Please send without charge Dutch Boy Painter Stencil Book.

Name.....

Street.....

City or Town.....

National Lead Company

New York Boston Buffalo Chicago
Cincinnati Cleveland St. Louis San Francisco

(John T. Lewis & Bros. Co., Philadelphia)
(National Lead & Oil Co., Pittsburgh)

repairs to unpainted structures is three times the cost of painting.

Lumber or steel lasts forever if kept well painted; it rots or rusts out in a few years or even months, if not kept painted. PAINT is the ONE free luxury, for it pays for itself three times more than it costs.

We will give one not unusual instance of fact showing the economy of painting. In the South today is a house built in 1857. It has been painted at least every five years and practically nothing has been spent on its repairs. The owner and his family have enjoyed the luxury all that time of living in a clean, well-kept and attractive home. In 1887 a house was built immediately adjoining the old one; it is similar in design and size, and was painted when erected, but never since. Today it would cost more to put it in repair than the entire cost of painting the older one all the years since it was built, and in the meantime the owner has lived in a dilapidated, unsightly and run-down house.

Take a board, paint it and set it beside a similar one unpainted, where the sun, rain, snow, gases of the air and innumerable other destructive elements are fighting a battle royal with them night and day. In six months you will be amazed at the deterioration of the unpainted one, while the other will show no change whatever.—American Paint & Oil Dealer.

Mildew on Painted Work.

This is a frequent complaint from subscribers, especially in New Orleans and vicinity. Mildew on exterior paint may be due to one of several causes, though the exciting cause in any case is dampness, for it never exists where it is perfectly dry. It occurs in shaded places, under porches, on oiled porch ceilings, and on the north and sometimes on the east sides of houses. Fatty oil paint, and paint containing certain pigments, ochre for example, are most disposed to mildew, which is a fungus growth. There is more or less mystery attached to the mildewing of paint, but it is certain that it occurs in damp or shaded places and with certain kinds of paint more than with other kinds. It may be washed off with water and soap and a scrub brush, but this will not insure its not appearing again in time. It might be worth while to try a paint (on places liable to mildew) with some turpentine in it and little riders, though if it is too long drying that may invite the trouble we seek to avert.—Ashman Kelley.

Care of Oil-Soaked Waste and Rags.

The danger of spontaneous combustion from rags or waste saturated with oil in shops, garages and residences is not sufficiently understood. This is, no doubt, because most people do not know that linseed oil will oxidize rapidly, and if cotton is soaked with oil, enough heat will be generated in a short time to char the cotton.

It is a common thing for pipe fittters to clean the red lead and oil from a new joint by wiping it with a handful of waste. It is also common for the workman to carry the waste in his pocket.

The safe thing to do is never to put oil-soaked rags away for safe keeping. Either burn or wash them at once. In mills, power stations, shops, garages, etc., where there is a quantity of oil-soaked waste, cans should be provided to receive the discarded waste.

—Popular Mechanic.

Sizing a Sand Finished Wall.

The surface of such a wall is too porous to make it easy to apply kalsomine, though of course it can be done, the water paint serving as a filler. But it is better to give it a size of glue water, or, better still, the alum-soap-glue size, made as follows: Cut up and dissolve in hot water 8 ounces of common laundry soap, in one-half gallon of water, and in another vessel dissolve 8 ounces of powdered alum. Then put to soak 8 ounces of white sheet glue, in water sufficient to cover it, and when swollen up all it will, pour off the water and pour onto the glue one-half gallon of boiling water. Then mix together the glue and soap solution, stirring it well, then stir in the alum water, stirring again until the whole is mixed. One painter who used this formula found that the mixture was badly curdled, and referred the matter to me for explanation.—American Paint & Oil Dealer.

SHERWIN-WILLIAMS PAINTS & VARNISHES

Our free "Style Portfolio of Home Decoration" will give you decorative plans for every room in an average house. The rooms are shown in color and there are complete working specifications telling just which of the Sherwin-Williams products to use to get the effects shown. If you contemplate building, remodeling or redecorating any room of your home this Style Book will be a wonderful help to you.



Free Portfolio sent upon request

Address all inquiries to **The Sherwin-Williams Co., 629 Canal Road, N. W., Cleveland, Ohio**
Decorative Show Rooms at Chicago, Cleveland and New York

IXL ROCK MAPLE AND BIRCH FLOORING

ROCK MAPLE IXL FLOORING

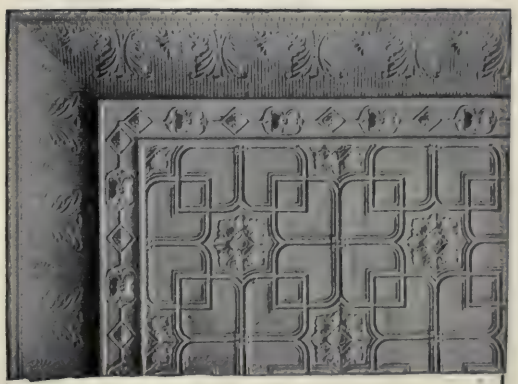
"The Finest Milled Flooring in the World"

¶ One important feature is is the **wedge shaped tongue and groove** which enters easily, drives up snug and insures a **perfect face** at all times **without after smoothing,** an advantage that is not obtained by any other manufacture.

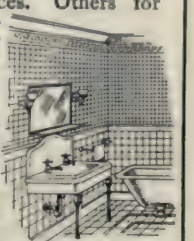
Our method of air-seasoning and kiln drying **has stood the test for thirty years.**

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Address
Wisconsin Land & Lumber Co.
Hermansville, Mich.



A CEILING LIKE THIS in Modern English style for your Library or Dining Room, is one of many we have appropriate for residences. Others for Parlors and Bedrooms. Beam ceilings in metal if desired, all different from those commonly seen in commercial buildings.



Sanitary---Incombustible

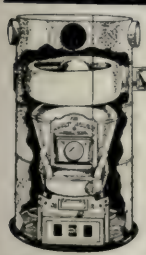
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OUR TILE BOOKLET

shows just what you want for the walls and ceilings of the Bath and Kitchen.

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Save ⅓ to ½ on Fuel Bills



OUR MONTHLY PAYMENT PLAN makes it easy for you to purchase a

JAHANT DOWN DRAFT FURNACE

Have plenty of heat wherever and whenever desired. You are sure of satisfaction because we issue a 365 day Guaranty Bond. We sell direct paying freight and saving you dealer's profits. Install the Jahant yourself. We send complete outfit—furnace, pipes, registers, etc., with special plans, detailed instructions and necessary tools.

Send for free furnace handbook.

THE JAHANT HEATING CO.
30 Mill Street Akron, Ohio

BUY YOUR FURNACE $10 DOWN $10 A MONTH

Heating, Lighting and Plumbing

A New Gas for Lighting Country Homes.

THROUGH a discovery by Dr. Walter O. Snelling, consulting chemist of the bureau of mines and the Panama canal commission, stationed at Allegheny arsenal, people who get a bungalow in the country or who want to put in a few weeks camping outside of civilization will be able to carry their own lighting plant along in an additional suit case.

Dr. Snelling has developed a liquid gas, of which a little steel bottle will carry enough to light an ordinary house three weeks or a month. The product already is available commercially, plants have been established and preparations made to supply the farmer and the country home without delay.

The liquifying of gas has been tried for many years, but not until this young chemist perfected his invention has there been success, the pressure required being so great as to prevent the process being practical.

Uses Most Powerful Ingredients.

The inventor found it possible to extract the elements of natural gas, which gives it its greatest heat and energy, leaving out the inert gases and the methane, which have less heating value.

Into an ordinary steel bottle, four feet high and six inches in diameter, can be put 2,000 cubic feet of gas. This bottle can be easily handled by one man.

The advantage that will appeal to the consumer is that it will give five times the light that coal gas gives and eight times as much as natural gas. It has a heating value a cubic foot of about 3,000 B. T. U., while the value of ordinary natural gas is 1,000 B. T. U., of Pintsch gas 1,500, of coal gas 630, and of manufactured coal gas 635. The new gas is said to be much less expensive than coal, natural or other commercial gas. Ordinary piping and burners are used, but a small mantle gives with the new gas a brighter and steadier light than the ordinary sized mantle furnishes with either natural or coal gas.

The properties that make it so much brighter also give it the advantage of superior heating power, with the result that the kitchen stove will be robbed of its terrors and the back-to-the-farm movement will have another reason.

The new gas is regarded safer than any other as to explosion, and it is not affected except by extreme cold. The pressure is never more than 500 pounds, whereas heretofore all efforts to liquify gas have been fruitless because of the great pressure necessary. Should there be accident there is less liability of asphyxiation, and the only effect would be a sort of dream, pleasant while it lasts and leaving nothing worse than a rather bad headache it is said.

Dr. Snelling has captured what heretofore has gone to waste. The gas that he liquifies is the gas which escapes whereever a gas well or an oil well exists. For every gallon of petroleum taken from the ground more than a gallon of gas goes to waste. It is this waste which the young chemist harnessed so that it can be shipped anywhere.—Exchange.

Automatic Heat Regulators.

No matter how carefully a furnace is run, there are many times when it delivers either too much or too little heat.

Besides causing discomfort and annoyance, these sudden changes bring on colds and other sickness. Both health and comfort require a reasonably uniform temperature.

Without automatic control a considerable part of the coal burned is wasted.

When a brisk fire is started in the morning to warm the house quickly, the

Plan for an Underfeed NOW

GET READY TO

Cut Your Coal Bills

½ TO ⅔



Cut-Out View of Underfeed Furnace



Underfeed Boiler

Write for Furnace or Boiler Booklet

IN these days of summer heat be wise. Prepare for the chill of an early winter by installing an **Underfeed** Furnace or Boiler. Plan to reduce your heating expense next winter. Act now. Don't wait for the fall rush. The Underfeed positively cuts coal bills ½ to ⅔. It has done it for thousands the past ten years, never failing to produce adequate, **clean, even** heat in the very coldest weather. Let us prove it. Write for descriptive booklet and convincing fac-simile letters from users of

THE PECK Williamson Underfeed FURNACES BOILERS

W. N. Chandler, University City, St. Louis, Mo., writes: "Three years ago I installed an Underfeed. My fuel bills ranged, previous to that time, between $105 and $120 a season. After the first season's use—1909-10—I was greatly surprised to find my bills reduced to $48. The following year—1910-11—they were $44, and this year, with our extreme severe winter, $56. I have no trouble whatever in heating my house to any desired degree."

The Underfeed is easily regulated and requires little attention. Fire is on top and in direct contact with the most effective radiating surfaces. Even heat results—no blanketing of fire with fresh coal as in ordinary furnaces. No alternating chill and heat. Always steady, *even* heat.

The Underfeed soon pays for itself and then keeps on saving for its owner practically for a lifetime. Think what this saving means to you—coal bills reduced ½ to ⅔ every winter. In the Underfeed, cheap slack soft coal and pea and buckwheat sizes of hard and soft coal yield *more* heat, *cleaner* heat and more *even* heat than high priced coal in other heaters.

Smoke and gases, wasted in other heaters, pass up through the fire in the Underfeed, are consumed, producing more heat. This means perfect combustion—no gases or smoke, no soot, no clinkers and but few ashes.

If you are about to build; if you paid *dearly* for *unsatisfactory* heat last winter; if you still use stoves or grates—fill out coupon for FREE furnace or boiler booklet and many fac-simile testimonials which emphasize the economy and efficiency of the Underfeed.

FREE Heating Plans and Estimates Prepared for You by Our Engineering Department. Write TODAY.

THE PECK-WILLIAMSON CO. 385 West Fifth Avenue, CINCINNATI, OHIO

DEALERS—Write for our Winning Sales Proposition

SAVED $122!

Underfeed Boilers produce results as satisfactory as Underfeed Furnaces. *Howard Weiss, Seigfried, Pa. 1st Vice President Pennsylvania Ass'n of Postmasters, wrote April 19, 1912: "Last winter my two Underfeed Boilers saved me $122 in coal cost."*

In writing for Furnace or Boiler Booklet, use this coupon.

THE PECK-WILLIAMSON CO., 385 W. Fifth Ave., Cincinnati, Ohio.

I would like to know *more* about how to cut down the cost of my Coal Bills from one-half to two-thirds. Send me—FREE—

UNDERFEED Furnace Booklet..... Boiler Booklet.....

(Indicate by X Booklet you desire)

Name..... *Street*.....

Postoffice..... *State*.....

..... Name dealer with whom you prefer to deal.

drafts are opened wide. Very often they are neglected or forgotten until the house is too hot. Then someone checks the fire and perhaps opens a window. Before long the house is too cold.

An automatic regulator not only keeps the temperature uniform at the degree desired, increasing the comfort and healthfulness of the home, but reduces and prevents the waste of fuel due to overheating. No more is burned than is actually needed. Some people say that their coal bills are reduced as much as 25 per cent, because of the vigilent watch the automatic regulator keeps over the fire. By preventing overheating as well as sudden heating and cooling, it lessens expense for repairs and lengthens the life of the furnace. It relieves the householder of most of the care of his heater. The drafts require no attention. The fire burns evenly.

There are a number of excellent regulators on the market; some of them for warm air furnaces, some for steam or hot water. Their cost is very moderate; in fact, there is no reason why every heating plant should not be equipped with one. Builders may well study up on thermostats and be prepared to recommend them. They are simple both in installation and in working.



REAL HELP FOR HOME-BUILDERS

Nothing helps the home-builder to secure just the features wanted as much as a big variety of designs and floor-plans showing the best types of homes.

"DISTINCTIVE HOMES AND GARDENS"

give endless suggestions, show scores of different arrangements of characteristic homes—covering every phase of building. No. 1—35 designs, $1000 to $6000, $1.00; No. 2—35 designs, $6000 to $15000, $1.00; No. 3—Combining No. 1 and 2 $1.50. Stock plans priced in each book. Ask for special offer on original plans—descriptive circular sent upon request.

-The Kauffman Company-

621 ROSE BUILDING CLEVELAND, OHIO

Enamel vs. Bronze for Radiator Surfaces.

Having carefully studied the experiments of others, we began to make experiments on our own account to ascertain the effect of bronze and radiator enamels on radiation. The result of a large number of tests is tabulated below.

Increased Efficiency of Enameled Radiator over same Radiator when Bronzed.

(All 38 inches high.)

Kind of Radiator.	Per Cent.
Rococo 1 Column	9.0
Rococo 2 Column	17.0
Rococo 3 Column	16.5
Rococo 4 Column	15.0

We have made hundreds of experiments and tests, and find in every test that radiator enamels increase the heating effect of cast-iron radiation. The secret of the increase lies in the varnish, which constitutes the body of the paint or enamel. The better quality of varnishes, which are made from high-grade resinous gums, make the best possible base for radiator enamels.

We find in our experiments that color has no effect whatever, it does not matter whether the radiator is covered with white, black, red, blue, green, or yellow enamels, the effect on radiant heat is the same. We have also covered radiators with four coats of white enamel, one on top of the other, and up to the last coat the emission of heat gradually increased. Putting on five or six coats does not increase the emission, nor does it seem to diminish it.

From the many experiments we have made, and from what we can learn of experiments made by others, we deduce:

First. That the best possible covering for radiator surfaces, in the way of decoration, is a good enamel with a base of good varnish, made from resinous gums.

Second. That the priming coat should be of some carefully prepared mixture that will not discolor the finishing coat.

Third. That the worst possible surface covering is galvanizing with zinc inside and out.

Fourth. That the generally accepted belief that successive layers of paint or enamel on radiator surfaces reduce the heating effect has no foundation in fact.



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Royal Round Hot Water Heater.

Royal Sectional Steam and Water Heaters.

MANUFACTURED BY

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This Handsome Fireplace Complete $38

Complete and ready to install. Includes Andirons, Wrought Iron Fender and the famous Colonial Head Throat and Damper. Selected face brick, choice of either rough or smooth texture in many colors. Complete with working plans, ash trap and color for mortar. Size 6 ft. wide, 4 ft. 6 in. high to shelf, 9 ft. to ceiling.

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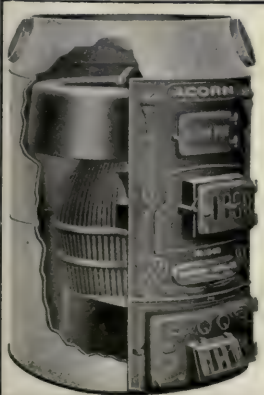
Send 25c in stamps for our handsome and instructive portfolio showing many different designs in fireplaces. Or write us today for our booklet, *"Home and the Fireplace,"* FREE.

COLONIAL FIREPLACE CO., Dept. 177 B
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The Latest Ideas in Home Decoration

A FREE Correspondence Service

TO the subscribers of Keith's Magazine is offered the service of our **Expert Decoration Department** in planning a decorative scheme for any room in your home or for several rooms. This service should prove very valuable to you, especially where strictly up-to-date decorators are not accessible in your home town. We make this a free service as one of the advantages open to the subscribers of **KEITH'S MAGAZINE,** the recognized authority on Building and Decorating Artistic Homes. Subscription, Two Dollars a year.



"The Furnace of Few Joints"

DUST PROOF AND GAS PROOF

The body of an ACORN FURNACE is composed of six pieces, fitted together with deep cut joints.

The joints are packed with asbestos and are gas tight. Simple and practical.

SAVE COAL

Greater radiating surface and large air chamber increase the volume of warm air, making Acorn Furnaces—

"AMERICA'S VERY BEST"

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Rathbone, Sard & Co., Aurora, Illinois

Tear off here and mail today

Send me your booklet, "Hints on Healthful Heating."

Name.....

Address.....

SPLINTERS AND SHAVINGS

Finishing Oak Floors.

By W. L. Claffey.

THE finishing of an oak floor is a very important feature, upon which authorities fail to agree, but the question resolves itself into a matter of cost, as to the color or brilliancy of finish desired. Personal taste, artistic or decorative effects are the guide for the floor finisher.

The "clear" grade of oak flooring should have a natural oak filler—color of oak. The "select" and "sap clear" grades a light golden oak filler should be used, and after the floor is filled, it should be gone over with a little burnt umber mixed with turpentine to darken light streaks. This will make the "select" and "sap clear" grades look like the "clear" grade, except that it will be slightly darker in color. In filling the "No. 1 Common" grade, a dark golden oak filler should be darkened in the same manner as the "select" and "sap clear" grades. If a little more care is used in laying this grade, splendid results can be obtained.

First: Treat the floor with a paste filler of desired tone, to fill up the pores and crevices. To thin the filler for application, one has a choice of using turpentine, benzine, wood alcohol or gasoline to get the right consistency. When the gloss has left the filler, rub off with excelsior or cloth, rubbing against the grain of the wood. This will make a perfectly smooth and level surface. It keeps out dirt and forms a good foundation, which is the keynote for successful treatment of floors. Allow the filler twelve hours to set or dry before applying a wax or varnish finish. Never use a liquid filler on any floor.

A wax or varnish finish can be used. The wax finish is preferred by many, due to economy and ease of renewing places that show the wear. The renewing can be easily applied by housekeeper or servant.

Wax Finish.. The best method for applying the wax is to take cheesecloth and double it to get a little more thickness; then make it into a sort of bag. Put a handful of wax inside of this and go over the floor thoroughly. You will find that you can work the wax through the meshes of the cheesecloth to give an even coating over the floor. This prevents too much wax in spots and wasting it. After the floor has been gone over with the wax and allowed to dry say about twenty minutes, it is ready for polishing. Rub to a polish with a weighted floor brush, first across the grain of the wood, then with it. (A clean, soft cloth can be used in place of the brush if desired); then a piece of woolen felt or carpet should be placed under the brush to give the finished gloss. After waiting an hour, a second coat of wax should be applied in the same way as the first and rubbed to a polish.

Varnish Finish. This is usually more expensive than the wax finish, but it gives a very hard surface, yet at the same time it is elastic. Two or three coats should be applied after. the application of the paste filler. Each coat should be thoroughly rubbed with oil and pumice. Any of the standard hardwood flooring varnishes are recommended.

Floor Oil Finish. When a high class finish is not desired, a very economical finish can be had by the use of a light flooring oil, that is made expressly for this purpose by many paint and varnish houses and oil makers; it serves as a filler as well as a finish and is strongly recommended for oak flooring in public institutions, office buildings and stores. This oil keeps the dust from rising and preserves the floor.

Cost of Building Construction.

With the single exception of San Francisco it has been said that it is more difficult to carry on building construction work in the city of New York than in any other in the whole United States. In the case of the former city the difficulties are those imposed by labor, while



No. 875½.

"REPUTATION AND QUALITY COUNT"

$28.60

For this elegant, massive selected oak or birch, mahogany finished mantel, beveled mirror 18x36,

"From Factory to You"

Price includes our "Queen" Coal Grate with best quality enameled tile for facing and hearth. Gas Grate $2.50 extra. Mantel is 82 inches high, 5 feet wide. Furnished with round or square columns as shown in cut.

Dealers' price not less than $40.00.

Central Mantels

are distinctive in workmanship, style and finish and are made in all styles—Colonial to Mission. **Catalogue Free**—Will send our new 100-page catalogue free, to carpenters, builders and those building a home.

CENTRAL MANTEL CO.
1227 Olive Street ST. LOUIS, MO.



MAXWELL'S LAKESIDE RUG BORDER

THAT isn't a hardwood floor, though it does look like one.

It's Maxwell's Lakeside Rug Border.

To put a costly hardwood floor on a room and then cover 90% of it with a rug is extravagance. Use Maxwell's Lakeside Rug Border instead. It is a durable, flexible flooring grained exactly like wood and handsomely varnished.

It mitres perfectly at the corners and lies flat and smooth without curling or buckling. Needs no nailing or pasting. Warm, sanitary, non-slippery, easily laid. It comes in rolls in Light Oak, Golden Oak and Dull Oak—buy it by the yard. Can be revarnished like a wood floor but doesn't need it so often. Costs one-tenth as much as wood.

If not carried in stock by your dealer, give us his name and write us for samples.

S. A. MAXWELL & CO.
Wall Papers Window Shades Rug Borders
BROOKLYN CHICAGO KANSAS CITY

THE MOLINE SYSTEM HEATING

WILL BE THE BEST INVESTMENT YOU CAN MAKE. USE IT IN YOUR NEW BUILDING. SEND FOR INTERESTING READING MATTER. "No more pressure than in your tea kettle and just as simple."

MOLINE VACUUM-VAPOR HEATING CO.
Dept. C, Moline, Ill.

Make Your Own Gas



THE pleasure of living in the country or small town is greatly enhanced by a few city conveniences, the most necessary and comfort giving of which is a **Satisfactory Gas Supply.**

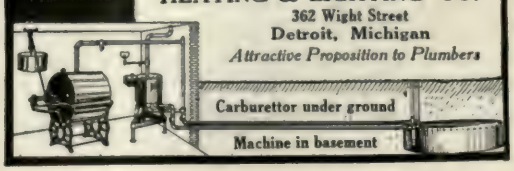
Gas to Light with.
Gas to Cook with.
Gas for Laundry purposes:
Gas to heat water for the bath and other uses.
Gas to operate a gas engine for pumping and other purposes.

You can have all these conveniences cheaply and automatically by installing the

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FOR ILLUMINATING AND COOKING

Will not increase your insurance rates. On the market over 40 years. More than 15,000 in use in Residences, Stores, Factories, Churches, Schools, Colleges, Hospitals. It will Pay You to investigate. Write us today—NOW—a postcard.

DETROIT HEATING & LIGHTING CO.
362 Wight Street
Detroit, Michigan
Attractive Proposition to Plumbers



The "Crescent" SASH FASTENER

Strong and Finely Finished.

Made in Iron, Brass and Bronze Metal.



88-Page Catalogue Builders' Hardware Free.

The H. B. IVES CO., Mfrs., NEW HAVEN, CONN.

in New York City the difficulties are due to complexity of building laws. In discussing this subject and that of simplifying legal building requirements a writer in a recent issue of the Record and Guide gives some rather interesting figures showing the cost per cubic foot of construction in several of the leading cities. In New York City construction is about 2 cents a cubic foot higher than in San Francisco, while in San Francisco construction costs run from 12 to 15 cents more than in other cities similarly situated with regard to shipping and railroad facilities. As a matter of fact construction in both New York and San Francisco should be lower than in Chicago, Denver and New Orleans, yet the range of cost for average buildings in American cities is as follows:

Construction Costs.

	Cents per cu. ft.
New York (Greater)	23 to 28
San Francisco	21 to 26
Chicago	20 to 25
Boston	20 to 23
Pittsburgh	20 to 22
New Orleans	19 to 20
Oakland	18 to 21
Denver	18 to 19
New Haven	18 to 19
Philadelphia	16 to 18

From the above it is apparent that the local operator in Great New York has to pay more for the legal requirements imposed uopn his contractor than do operators in other cities, due allowance being made for the fact that union wages are higher here and in San Francisco than they are in any other city.

California's New Mechanics' Lien Law.

The new mechanics' lien law which recently went into effect in California is receiving considerable attention from builders. Under the provisions of this law the owner of a building will be held responsible for the payment of labor and material bills incurred during its construction, no matter how many times a contract may be sublet. The new law protects laborers, material-men and subcontractors from dishonest contractors and will be of decided benefit to plumbers, who in the past have suffered financial losses amounting to a considerable sum through the acts of general contractors from whom they have secured jobs. It will now be necessary for the owner to ascertain for himself whether or not bills have been paid and it will be to his interest to protect himself by insisting that contractors give proper bonds.

What About White Pine?

For some reason, not explainable, the impression has gone abroad that White Pine was soon to become, like the Buffalo, an extinct species, a memory, albeit a hallowed one, and many persons were filled with regret that this was so. It was the wood of our forefathers, and used by them for all purposes—because of its natural beauty of grain and color and easy working properties and had always been one of the more widely used of all the American woods.

The facts are that in Massachusetts alone, one of the states supposed to be denuded of timber—238,000,000 feet of White Pine was cut in the year 1908 and the "Forest Service" reports that a similar amount might be cut each year in that state, without the visible supply being affected to any great extent.

Massachusetts is not supposed to be a great lumber state as compared with such states as Wisconsin and Minnesota, and yet she produced this enormous cut in one year. Upwards of 1,250,000,000 feet are cut each year in the two states last mentioned, which are known to produce the best White and Norway Pine now extant.

Various Uses of Vacuum Cleaner.

Electric vaccum cleaners have so far demonstrated their efficiency for the purpose for which they were primarily intended that they have been put to many other tests and found to be very versatile tools in deed. Many women use them for drying their hair, a Colorado woman devised from hers a vacuum fly trap, but a Kansas woman has discovered what dealers say is the most remarkable use to which a vacuum cleaner has ever been put. She writes:

"I have used my machine for cleaning the clock, the piano, and the door mat,

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Great Building Opportunity:

12 complete plans with estimate of material and price . . . For **$1.00**

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36 x 24 inches

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The writers, selected by Architect Fred T. Hodgson, Editor, cover the entire building field.
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Works Wonders in Beautifying Home!



For Simplest and Grandest Homes

CHARMING Moorish beauty and dignity of appearance of Metal Spanish Tile gives an air of distinction to the home graced by this wonderful new and practically indestructible roofing.

It has taken home builders of America by storm, for it is the modernization of the wonderfully beautiful roofs of historic Spanish edifices.

The art of making this roofing, left behind by fleeing Moors driven out of Spain centuries ago, until 1910 could not be made practical for the modern home, despite its alluring beauties.

After years of experiment, we have hit the solution. That is why today we are able to offer American homes the amazing attractiveness of

Metal Spanish Tile Roofing

Its scores of vital, practical advantages cost no more than common roofing, yet mean tremendous economy—it needs no repairs and outlasts several ordinary roofs because of its practically indestructible metal construction.

It is absolutely wind, weather, storm, fire and lightning proof.

Easy to apply. No soldering, no special tools—any ordinary mechanic can apply it. Interlocking system by which tiles dovetail into each other makes the roof absolutely water tight and provides for expansion and contraction perfectly—summer and winter. It is guaranteed non-breakable.

HOME-BUILDERS — Simply send us today the dimensions of your building and we will tell you by return mail exact cost of all material. Our new 1912 book on beautifying the modern American home by use of **Metal Spanish Tile** is yours for the asking. A postal will bring it. Address

The Edwards Manufacturing Co.

The Largest Makers of Steel Roofing and Metal Shingles in the World

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and yesterday I used it for cleaning the fleas from my dog. My husband ran the end of the tube over and through the dog's hair, close to the skin. When the nozzle touched a flea it was drawn in. When I got through with the dog there was not a flea on him. I then took the cleaner outdoors and dumped the dust bag into a tub of water and drowned all the insects."

A Home-Made Floor Polisher.

A floor polisher is something that one does not use but two or three times a year. Manufactured polishers come in two sizes, one weighing 15 lbs., which is the right weight for family use, and one weighing 25 lbs.

A polisher can be made at home that will do the work just as well. Procure a wooden box such as cocoa tins or starch packages are shipped in and stretch several thicknesses of flannel or carpet over the bottom, allowing the edges to extend well up the sides, and tack smoothly. Make a handle of two stout strips of wood, 36 in. long, by joining their upper ends to a shorter cross-piece and nail it to the box. Place three paving bricks inside of the box, and the polisher will weigh about 16 lbs., just the right weight for a woman to use. The polisher is used by rubbing with the grain of the wood.—Popular Mech.

Reinforced Concrete Buildings in Japan.

From Consul General Thomas Sammons, Yokohama.

A new modern office building has been completed in Yokohama opposite the American consulate general. It was designed by a Japanese architect and is made of and furnished almost exclusively with Japanese products, the most notable exception being an American (Otis) automatic elevator. The reinforced concrete features of this structure are attracting favorable attention among builders. Representatives of the American system of reinforced concrete structural methods are now in this district and are confident of securing satisfactory results. The building is provided with a roof garden.

The Mitsui Bussan Kaisha Co., for which the structure was built, is the trading department of the famous Mitsui Industrial & Banking establishment of Japan, which has branch offices throughout the world, its New York office being at 445 Broome street.—Cement Age.

"How do you make men work?" a prominent contractor was asked recently. "I don't make them work," he replied—and that is probably the reason of his success with men—they work of their own accord, work because they respect him and because they like his treatment of them, his sympathetic though firm leadership, his loyalty and fairness.

There are all kinds of men and all kinds of results to be obtained from employing them. Some are profitable for their employers, others are not. Many are willing to work and some willing to shirk and the difference betwen working and shirking is frequently the difference between profit and loss for the employer.

Contrary to the opinion of many, labor is practically an exact science. Wages are fixed in advance and every builder of experience knows about how much work he may expect as the result of each day's labor. In checking labor items this is the first computation to make—how much is a fair day's work? After having done this, contractors should expect good, average efficiency from every one in their employ, well up to the standard day's work they know men are capable of, under right conditions. Mechanics who drop below this efficiency will bear watching and a builder should keep tabs on his men to the extent that he may know whether they are keeping up to the mark or not. Many contractors, recognizing the necessity of examining into the efficiency of their men, keep a card index record of each, marking every man a certain percentage at the end of every week's work. For instance, if inspection of the time card of the employee under scrutiny, in addition to inspection of the man's work, shows that a brick wall such and such size was built in a week, and if the amount of wall built in that time was sufficient according to the ideas of the employer, then that workman's card would be marked 100 per cent. If only three-quarters as much wall was built as by the other man, then his card would be marked 75 per cent.—Ex. from article by Chas. White, Jr., in Building Progress.

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used only in this quality. Will outwear common roughly braided cord or metallic devices many times over. Send for copy of tests showing its great durability.
For sale by Hardware dealers. If your dealer cannot supply you, order of us direct giving his name. Write to-day anyway for sample and our illustrated booklet No. 4 showing various kinds of Samson Cord. A handy guide to buying.

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Delivered East of Omaha and North of Ohio River Pipes and Registers Extra

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New Booklets and Trade Notes

THE SPECTRUM for April, published by the Sherwin-Williams Decorative Department, is such a charming exponent of modern advertising as to deserve special mention. The Number is devoted to illustrations of the new Decorative Display rooms just opened in The Cuyler Building, New York, by this firm. A double-page illustration in delicate pastel coloring shows the roof-garden entrance hall to their display room,—a unique and captivating conception delightfully rendered. The Sherwin-Williams people are proving that attractive effects pay even in business quarters.

* * *

The Rapid Heater Co. issue a booklet of interest to all home builders, giving illustrations, descriptions and prices of their different models for instantaneous Bath Heater.

* * *

Spencer Kellogg & Sons, Minneapolis, send out a convincing booklet setting forth the superior merit of their Pure Linseed Oils, of interest to the painting trade.

* * *

The Reynolds Flexible Asphalt Slate Shingles, Grand Rapids, Mich., are illustrated and described in a new booklet just received from them. Many testimonials are included in the contents, and the reader will do well to examine this booklet.

* * *

A Warm Friend—is the title chosen for the red booklet of the Holland Furnace Co., Holland, Mich., just received at this office.

* * *

Corb-Mesh is the rather striking name chosen by the Corrugated Bar Co., Buffalo, N. Y., for their product and the booklet sent out to describe its special advantages. Illustrations, working diagrams and exhaustive directions for use fill the fifty pages of this large booklet.

The Wolf Drinking Fountains are superbly illustrated in the handsome catalog sent out by the L. Wolf Manufacturers of Plumbing Specialties, with main offices in Chicago.

* * *

We have received from the Norman W. Henley Publishing Co., New York, copies of three of their recent publications as follows: House Wiring, by Thomas W. Pappe, price 50c. This book treats the installation of electric house lighting in a clear, non-technical manner, and is illustrated throughout to show the various operations described. It is certainly of value to all electrical workers.

Brazing and Soldering, price 25c, is No. 5 of a series of practical papers, and will enable the workman to even make a furnace.

Knots, Splices and Rope Work is another book full of shop kinks, price 60c.

The Henley Publishing Co. have a large list of these scientific and practical publications. Catalog sent on request.

* * *

"Our Own Boilers" is the new catalog sent out by the Novelty Iron Co., Canton, Ohio, and it is a handsome, comprehensive presentment of their products. Profusely illustrated by photographs of all the parts and fixtures; it also contains complete tables of dimensions and capacities and should receive the attention of all interested in building.

* * *

The Globe Ventilator Co., Troy, N. Y., send out a unique booklet showing their ventilator—"built on honor, sold on merit." Nothing in construction work is of greater importance than provision for pure air. The company send a blue print or working model showing the operation of the Globe, on request.

* * *

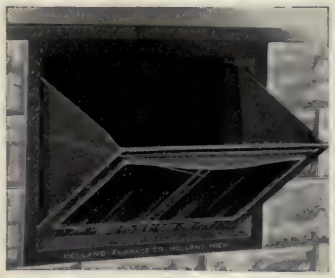
The Corbin Hardware Co. send us catalog K-33, describing the Corbin Anti-Panic Door Fixtures, with supplemen-



The Window Chute

A Real Window — A Perfect Coal Chute

Useful 364 days in the year for light and one day for the coal man.



A Burglar-Proof, Air-Tight Window which conforms with architectural lines. Looks best and is best. Write for booklet giving full description.

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"Holland Furnaces Make Warm Friends"



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GARBAGE AND REFUSE RECEIVERS

for a clean back yard—and for sanitary and fireproof disposal of waste in factory, cellar or garage. 9 years on the market. It pays to look us up. Sold Direct. Send for Circulars.

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The Recessed Steel Medicine Cabinet

The Only Modern, Sanitary STEEL Medicine Cabinet

orlocker finished in snow-white, baked everlasting enamel, inside and out. Beautiful beveled mirror door. Nickel plate brass trimmings. Steel or glass shelves.

Costs Less Than Wood

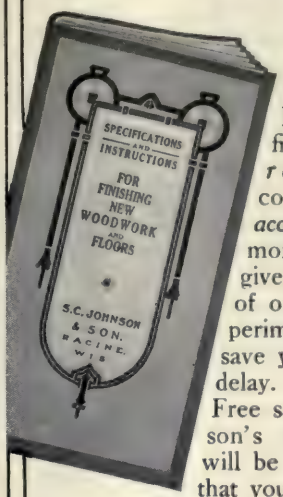
Never warps, shrinks, nor swells. Dust and vermin proof, easiiy cleaned.

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Four styles—four sizes. To recess in wall or to hang outside. Send for illustrated circular.

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Makers of Steel Furnaces. *Free Booklet.*

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Because its specifications are *correct*. Its list of covering capacities *accurate*, its testimonials *true*. It gives you the benefit of our expensive experiments, and will save you mistakes and delay.

Free samples of Johnson's Wood Finishes will be sent on request that you may form your opinion by actual working test. We want to *prove* the Johnson merit. You may also have on request, panels of any woods finished with our Dye. Judge for yourself the beauty of the results obtained.

Johnson's Wood Dye

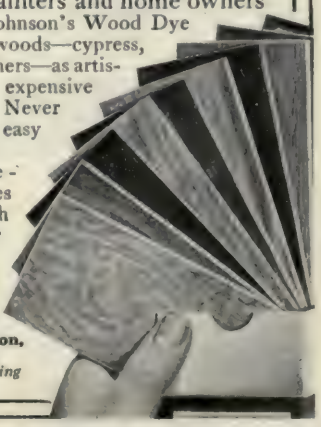
is made in fifteen artistic shades, as follows:

No. 126 Light Oak
No. 123 Dark Oak
No. 125 Mission Oak
No. 140 Early English
No. 110 Bog Oak
No. 128 Light Mahogany
No. 129 Dark Mahogany
No. 130 Weathered Oak
No. 131 Brown Weathered Oak
No. 132 Green Weathered Oak
No. 121 Moss Green
No. 122 Forest Green
No. 172 Flemish Oak
No. 178 Brown Flemish Oak
No. 120 Fumed Oak

Endorsed by architects, builders and contractors, painters and home owners everywhere. Johnson's Wood Dye makes the soft woods—cypress, red gum and others—as artistic and rich as expensive hard woods. Never raises the grain; easy to apply. Johnson's Prepared Wax gives that lasting polish which your clients are all asking about.

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S. C. Johnson & Son,
Racine, Wis.
"The Wood Finishing Authorities"



tary pages showing important additions and improvements. These fixtures for the instant automatic release of double and single doors, are like life boats on a vessel at sea. They should be a universal equipment for all public and semi-public buildings.

* * *

The Trenton Potteries Co. New Jersey, send out an unusually attractive booklet—Bathrooms of Character—showing many model Bathrooms with the very latest fitments. The quality and style of these illustrations cannot fail to impress the reader, who will also find much illuminating information in these pages.

* * *

Beautiful Floors is the title of the very attractive booklet sent out by the A. S. Boyle Co., Cincinnati, setting forth the superior merit of Old English Floor Wax over the soft wax polishes. This booklet gives full directions both for the finish of new floors and their care afterward and is of value to every housekeeper.

* * *

The Ideal Heating Journal for April, published by the American Radiator Co., and mailed free to those interested, has a varied and interesting table of contents. We especially note the opening article on Efficiency of Radiator Surfaces as Affected by Paints, extracts from which appear in another column.

* * *

The leading manufacturers of warm air furnaces have organized the Federal Furnace League, and issue for the use of architects, contractors and builders a pamphlet called the Federal System of Heating and Ventilating. The pamphlet explains the standardized system of installation and capacity ratings adopted by the league, together with the principles of effective and healthful heating.

* * * *

"The Proper Treatment for Floors, Woodwork and Furniture" is the comprehensive title of the new booklet issued by S. C. Johnson & Son, "wood finishing authorities."

The booklet is as attractive as it is comprehensive, illustrating in color their varied stains or wood dyes, showing the different effects produced upon different woods. Furniture and floors receive attention also in this booklet, which is full of interest to all homebuilders.

* * * *

We have received from the National Lead Co., New York, their booklet—"The Dutch Boy Painters' Stencil Book"—showing their stencil designs for wall or fabric decoration. Among these very excellent designs, those in the conventionalized rose motif is of unusual artistic merit and include simple borders as well as panel pieces and elaborate friezes. There are also dining room decorations in the grape motif with graceful leaf and tendril, almost equal to free hand work. This excellent booklet is sent on request.



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illustrates 40 plans of modern Bungalows, Cottages and Houses. "CHARACTER" in each design. Sent postpaid for $1.00. Sample pages 2c.

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Address nearest office.

CHICAGO DRYER CO., 630 So. Wabash Ave., Chicago, Ill. — *or* — SHANNON MFG. CO., 124 Lexington Ave., New York, N.Y.



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ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

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IDEAL HOMES MAGAZINE

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RUSTIC BRIDGE AND ROCK WORK IN GLEN BELONGING TO DAVENPORT ESTATE, SPOKANE, WASH.

KEITH'S MAGAZINE

VOL. XXVIII AUGUST, 1912 No. 2



GARDEN ENTRANCE SHOWING PERGOLA, WITH ENLARGED DETAIL OF TIMBER WORK AND WINDOWS.

Effective Use of Rustic Work in Home Grounds

By Henrietta P. Keith

ON a recent sojourn in Spokane, Wash., the writer was struck by the very effective and artistic results produced by the use of rustic work in connection with the beautiful country and city homes of that progressive city.

Spokane residences are as noteworthy in architecture as they are picturesque in situation. The Spokane architect and landscape gardener is to be sure wonderfully assisted by nature in his work, but it is also true that he makes a most intelligent use of nature's wealth of material.

Our frontispiece shows a feature of probably the most interesting grounds in Spokane, the home of L. M. Davenport. Five acres of wild ravine with a mountain spring and stream have been converted into a series of fourteen waterfalls and cataracts that broaden here and there into small lakes, as the mountain stream winds its way down the ravine. In the right is just a glimpse of where a long flight of rough stone steps begins, hewn out of the solid black basalt that underlies the city.

The native shrubbery has been retained wherever possible but supplemented with juniper trees and countless vines of flowering shrubs tucked into the crevices of the rocks in nature's own wil-



COUNTRY HOME OF G. L. CHAMBERLAIN, LIBERTY LAKE, SPOKANE, WASH.

treatment of the spring and stream 14 dams, some of them 75 feet long, have been constructed to produce the lakes and waterfalls, yet not a hint of the artificial material of the work is exposed. A rocky path winds along beside the stream, crossing and re-crossing it on rustic bridges, up through rocky walls to the highest level of all, where a Japanese tea house looks down upon the sparkling waterfalls below. The photograph shows one of these rustic bridges and the entrance to a rocky grotto. At the

ful fashion. Four thousand rhododendrons—Washington's state flower—have been planted. Some of the miniature lakes are bordered by Japanese iris, but through all the artificial has been kept subordinate to the natural wild beauty of the site, and one feels as if they were in one of the lovely glens of the German Black Forest.

In the next photograph is shown the garden entrance through a rustic pergola belonging to the handsome residence of F. Lewis Clark. The ivy for which old



RUSTIC WORK ON PORCH AND STAIRWAY, COUNTRY HOME OF G. L. CHAMBERLAIN.

time has but a "velvet touch," which riots luxuriantly about the dwelling will soon cover the pergola also. The picture shows the interesting detail of the timber work and Gothic window arches. The country home of G. L. Chamberlain, Liberty Lake, near Spokane, has been treated by rustic work in a very interesting manner. The hillside slopes steeply down to the water's edge, necessitating the retaining wall of the ubiquitous basalt rock. At intervals on the parapet are placed rustic boxes filled with flowers, a pleasing feature. The stately pines covering the hillside furnish the poles for the rustic pergola and gateway over the rocky flight of rough stone steps leading up from the water and the second picture, giving an enlarged detail of the rustic work on one corner of the porch steps, shows clearly its character. The rough pedestals of pine tree trunks crowned with flowers are specially effective for such a situation and in harmony with nature's way of uniting rugged roughness with tender grace.

"Arden Oaks"

By Hartley M. Phelps

"ARDEN Oaks," one of the most unique homes in the country, embracing original ideas as to utility and convenience and possessing much claim to the artistic, stands in one of the southern desmesnes of Pittsburgh,—the beautiful Mt. Lebanon district beyond the Monongahela. It is the country residence of Andrew G. Smith, a prominent attorney of that city, and was designed after his own ideas, his brother, A. Morgan Smith, architect, putting the ideas into workable shape. When the landscape treatment of the house's environment shall have been completed the whole will present a model country home, a finished picture of a pleasing domicile set in a fitting and harmonious frame. And while it will represent a considerable outlay financially it is not so large a sum as would preclude anyone in moderate or comfortable circumstances from doing what Mr. Smith has done. Hence this description should be of benefit to those prospective home-builders seeking a place of abode that will be the last word in domestic comfort and convenience.

One of the unique things about this house is the absence of stairs. As one passes under the arched porch there does not seem to be an architectural term applicable to this distinctive feature of the building and enters the front hall he notices a wide inclined way or ramp leading to the second story. This takes the place of dangerous flights of steps where children may tumble down, breaking collarbones or their elders court serious injury trying to descend in the dark. But in this hall it is never dark, in the daytime or when there is a moon, for a skylight of translucent reinforced glass diffuses a delightful illumination; ample



"ARDEN OAKS" FROM THE LEFT OR WESTERN SIDE OF THE HOUSE.

but not too strong for the most sensitive eye. The lighting by the silvery rays of the moon is something to which the denizens of the conventional house, lighted only by doors and windows, are strangers. It adds a note of enchantment to domestic life.

Of course the conventional stair-landing of the ordinary centerhall house is not in evidence. Where it is usually placed the ramp curves gracefully, turning on itself and terminating at the roomy well-lighted hall on the second floor.



THE HOUSE HAS A CASTLE-LIKE AIR.

There are also other ramps. One leads from the roof of the diningroom and kitchen, which form a one-story wing in the rear of the house, to the greater roof of the main structure. We know of no other house where one may pass from the road to the roof without using any stairs.

The prevalence of skylights is noted at every turn. There is one in the kitchen and another in one of the bathrooms, while a third lets light into the cellar from the level of the ground floor. The kitchen light also acts as an outlet for odors and fumes, a much superior method to the ordinary one of opening a door or window. Moreover a skylight gives the best illumination there is, the light being softer, more diffused and, of course, easier on the eyes.

To add further to the comfort of life under this roof, indirect artificial lighting is used wherever practicable. The glare and annoying shadows of exposed lamps are not known. As natural gas is used for the indirect illumination, Welsbach burners being utilized, the cost is quite inconsiderable. The light is thrown to the ceilings and walls, which are tinted in shades that reflect the same, the surface consisting of plaster. Electric lights, however, are used for direct illumination such as the lamps over the diningroom table, or in the library for reading.

Perhaps the most original feature of this entire house is the treatment of the roof areas, which are all flat and may be used as porches or outdoor sitting or playrooms in pleasant weather. The ordinary roof has but one function, the protection of the house, its interior and its occupants. Otherwise it is useless



FROM VERANDA, "ARDEN OAKS."

except as an ornamental feature, which very often it is not. But in this case the roof porches as it were, can be used for enjoying the beautiful scenery of hill and dale, meadow and creek. They are ideal places for evening entertainments. And for sleeping purposes on hot sultry nights their value is inestimable.

The roof of the arched porch has seats and in the center is a fountain with basin of concrete which cools the air in summer time. The roof over the rear wing is used as a promenade and al fresco porch.

The parapets enclosing all these porches are of the most original and artistic design. Instead of walls of concrete three feet or more high, as is the usual style in such cases, the wall is only part this height, the balance of the protection consisting of flowers and plants. These are imbedded in troughs in the concrete, filled with forest earth underlaid with cinders for draining, the water being carried off in pipes. Mr. Smith has christened this masonry and floral conceit a "florapet," and says that it acts as a structural protection. People, especially children, may sit or climb on ordinary parapets, thus not only endangering their lives and limbs, but scratching and marring the stone or woodwork, but everybody, even the ubiquitous small boy, has an inborn respect for flowers. And the flowers not only serve this useful purpose but they impart a strong note of beauty and artistry to the building.

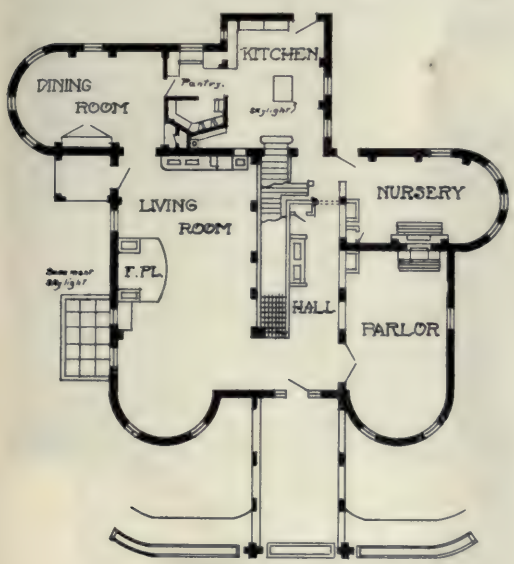
The same use of flowers set in concrete boxes of ornamental design forms a guard in front of the arched porch at the ground level, where there is a drop of eight feet or so to the carriage drive curving past the house. Also flowers are placed in small walls extending from the porch at either side along the drive.

A very attractive part of the house is the immense sitting room 31x18 feet,

forming the portion of the building to the left of the main hall.

Instead of the ordinary and unsanitary bath tub a pool with a shower has been installed in every bathroom. The latter are walled in glazed tile and equipped with plate mirrors.

There is an unusual system of water supply. The roof of the main building slopes to an inlet through which the rain water falls and is carried to a double cistern of concrete in each half of which is



~FIRST FLOOR PLAN~



~SECOND FLOOR PLAN~

a filter. This reservoir sets in the hillside back of the house and is lower than the roof. After being filtered the water flows back by gravity and furnishes drinking water, and also supplies the kitchen, bathrooms and closets.

The facades of the house embrace round, tower-like formations, which are part and parcel of the walls and do not project above the main body of the house. But the parapets give a castle-like air and the entrance porch is in keeping. There is nothing martial, however, about the place. It is the home of a peaceful American citizen, but like the baronial fortresses along the Rhine, it is built on a steep hillside and the landscape is being treated to harmonize with the castle-like scene.

The view from the front is superb embracing a lengthy valley stretching southward and bounded on either side by long slopes on which, here and there, pretty homes nestle. A short distance away two creeks coming from either side of the house, join and at the point of junction is a pretty concrete bridge of Gothic arch construction. Immediately to the left of the house as one takes in this view, is a fine forest of oaks through which the carriage drive extends. The changes of color in nature as the seasons come and go form one of the most attractive features of the scenery.

There are twenty-two acres comprised in "Arden Oaks." The owner cultivates a vegetable garden and thus solves the pure-food and high-price-of-living problem although his place is only forty minutes ride from the heart of the busy, teeming city of Pittsburgh. In fact the estate is a country home with all the conveniences and delights of the country and city combined and is a vivid object-lesson of what a city man with moderate means may do to make life worth living.

Pergolas and Arbors

Photographs by Mabel Tuke Priestman



CORNER OF RUSTIC PERGOLA IN GARAGE ENCLOSURE IN PASADENA, CALIF.



THIS PERGOLA IS ENTIRELY COVERED WITH ROSES; THE PLANTS ARE PLACED BETWEEN EACH COLUMN, AND THE ROSE PERGOLA IS A MOST ATTRACTIVE SPOT.



PERGOLA COPIED FROM AN ARBOR IN CENTRAL PARK, N. Y., COVERED WITH MAGNIFICENT WISTARIA VINES.



The Gateway and Pergola of Painted Wood with Supports of Newly Barked Timber Are Excellent in Design. The Garden Is Surrounded by a California Privet Hedge. As It Is Almost an Evergreen, the Rich, Dark Green Leaves Stay on Until Midwinter.



This Rustic Arbor Also Does Duty as a Bridge—Virginia Creeper Trails Over It in Abundance, and the Surrounding Trees Are Allowed to Mingle Their Foliage with the Brilliant Creeper.



This Pergola in a Small Garden Is Well Placed to Act as a Screen to the Service Quarters, and Is an Effective Termination to the Box-Edged Pathway. Crimson Ramblers Are the only Flowers Planted but They Are All Sufficient. There Is no Other Rose So Brilliant and of Such Vigorous Growth, and Their Green, Glossy Leaves Are Retained Until the Fall.



SUN PARLOR FURNISHED IN WICKER, UPHOLSTERED WITH GREEN DENIM.

Summer Furniture in Bentwood and Old Hickory

Photographs by Margaret Greenleaf

AS a change from the omnipresent wicker, the summer furniture manufactured in bentwood and old hickory is an agreeable relief. Fascinating as is the wicker furniture especially when combined with fetching cretonne upholstery, its universal prevalence is becoming a bit tiresome, and when a single house furnishing establishment acknowledges to selling three car loads of it in as many weeks, a great many people must furnish with it. For porch and sun parlor use the furniture here described and illustrated can be effectively substituted for the wicker, and indeed for outdoor porch use is to be preferred, as being more substantial and less liable to injury by the weather. We have seen stout men hesitate a good deal before accepting a wicker chair, and in truth the house chatelaine is not always easy in her mind, as to the results, when heavy weights twist and turn in her pet wicker chairs.



LIVING ROOM IN A COUNTRY HOUSE FURNISHED IN BENTWOOD.

In point of construction and variety of styles offered the modern bent-wood furniture is scarcely excelled. To those of us who are only familiar with the office chairs made by this company or those seen in cafes or grill-rooms the pos-



CHARMINGLY QUAINT LINES IN BEDROOM PIECES IN BENTWOOD.



AGREEABLE FURNITURE FOR THE BREAKFAST ROOM.

sibilities of this furniture for the home will be a revelation. There are pieces suitable for living-rooms, drawing-rooms, bed-rooms and dining-rooms, in fact, the entire house may, if so desired, be fitted with pieces of this make.

The photographs of the rooms here reproduced show some of the variety of the styles this furniture presents.

In the dining-room shown the chairs are particularly worthy of study, as these are attractive and designed along lines in nowise suggestive of the bent-wood chair as most generally understood. The bed-room pieces made by these same manufacturers are also to be recommended. This style lends itself particularly well to a German scheme of decoration and furnishing; the quaint forms of chairs, beds and dressing tables finding suitable setting in the conventionalized design and quiet neutral tones of wall coverings which are typical of this somewhat pronounced school of decoration.

Like the wicker tables which are readily moved about from porch to parlor and which have become such necessary pieces of furniture since afternoon tea has grown so popular, there are light tables in bent-wood in both round and oval shapes. There are muffin racks to match and tea carts with glass trays.



Buffet Serving Table in Old Hickory.



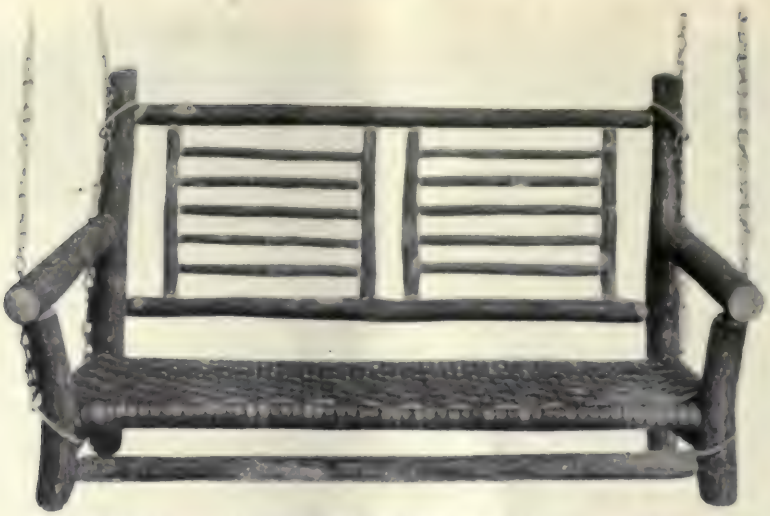
Writing Table in Old Hickory.

The charming dining room illustrated shows most agreeable shapes, finely finished and perfectly adapted to such a situation. The muffin rack has been moved into the drawing room in the first photograph and one cannot imagine anything more pleasing than this furniture so placed in a country house.

Especially quaint and charming are the bed room pieces illustrated with their slight suggestion of German influence.

"Old Hickory," although the ideal selection for porch and outdoor use, is no longer confined to these realms alone. The qualities characteristic only of this charming furniture, together with its adaptability to any surroundings, have won favor for it in many homes. Beautiful living rooms, libraries, smoking rooms, dens, etc., have been fitted up; bungalows and cottages artistically furnished throughout with it, and for designing a cozy and attractive sun-parlor it is thoroughly unique.

The general public who thinks only of the old style hickory chairs with splint seats and uncomfortable backs will be surprised at the style and quality of workmanship, now imparted to this furniture. Several pieces are here photographed which illustrates the degree of refinement now attained by the manufacturers of old hickory.



OLD HICKORY SWING SEAT FOR PORCHES—SET 38 IN. LONG, 16 IN. DEEP.

The framework of this unique furniture is made of young hickory saplings, which are cut in the fall when the bark will adhere to them. The various parts of the frames are mortised together solidly. The seats and backs of the chairs, settees and swings are woven of long strips of the stout inner bark of the sturdy hickory tree, which is strong as rawhide, and has an elasticity which gives to "Old Hickory" the comfort for which it is noted.

The prices vary with the size, style and fineness of the pieces. The buffet serving table illustrated has a top 18x36 inches and costs $50.00. The writing desk has a top 25x48 inches and costs $48.00. The porch swing seat costs $9.00 complete with chains.



WHERE OLD HICKORY FURNITURE IS GOOD.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.



THIS HOUSE WAS BUILT AND FURNISHED FOR $3,000.

THIS small but interesting house is but one story in height, but contains living room, dining room, kitchen, bathroom and two sleeping rooms. The house complete, including all stationary fixtures, costs exactly $2,500.

The home presents a very attractive appearance to the passer-by. It is of the "California cottage" type, but is not closely akin to the bungalow. It possesses a front and a rear porch and a miniature pergola on the side. It is built throughout of Oregon pine. The exterior



CORNER OF LIVING ROOM SHOWING FIREPLACE.

is stained dark green, with the trimming painted cream. It has a frontage of 38 feet and a depth of 40 feet, exclusive of the rear porch, which is 6x15 feet. The front porch is 8x22 feet.

The one door leading from the front porch opens into the living room, and the living room and dining room are connected by a portiered arch The former, 14x22 feet, has four windows, three of which are grouped as a bay window, and the latter, 14x16 feet, possesses two windows and a side door, half glass.

The color scheme of the two rooms is



LOOKING FROM LIVING ROOM INTO DINING ROOM.

in harmony, the woodwork being stained to resemble weathered oak, while the plastered spaces are tinted dark green, except the ceiling, which is in cream. The ceilings of both rooms are beamed, and the floors are finished to resemble hardwood. The walls of the dining room are paneled to a height of 5 feet, and a plate rack, heavily bracketed, extends around the room at this elevation. The dining room possesses an excellent large buffet, built in, which is finished and colored to correspond with the balance of the woodwork. The rooms are heated from a fireplace, shown in one of the accompanying illustrations. This fireplace is broad, low and deep, with a plain, neat mantel built of cream brick.

The front bedroom is 13x14 feet and the back one is 14x14 feet. The former is given a color scheme of pale green, and the latter is finished in pale blues. Each has two windows. The bathroom is located between the two rooms, with a door leading into each. The room is 7x8 feet, and to fill out the remaining 7 feet between the two sleeping rooms there are two 4x7 foot closets.

The kitchen, which is located so as to have its door open into the rear porch, is 11x13 feet. Its color scheme is buff. It is provided with cupboards, coolers and a sink, and has gas connections for the kitchen stove. The house is lighted throughout by both gas and electricity.

This house can be furnished in good taste for $500 or less. The home complete, including the lot at $800, would, therefore, cost about $3,800.



Anent the subject of furniture, it may be stated that the expenditure therefor can be made either great or small, and would vary to a certain extent for different localities. The writer, has had in mind, however, furniture of good design and of such design as to correspond with the size, the finish and the needs of the various rooms. For instance, the furniture for the living room and dining room should be of weathered oak. Suitable rugs for these rooms, as well as portieres, tables, lounges, etc., are also considered.



Home Grounds and Gardens

Evergreen and Ornamental Planting

By Caspar Greiner



GROUPING OF YOUNG PINES, SPUCE, ARBORVITÆ AND RETINOSPORAS.

THE two best months in the year for transplanting evergreens are May and August. Where summers as a rule are hot and dry, August should be preferred; where winters are severe and set in early, May is the better month of the two. All general conditions considered, however, August planting of evergreens usually is productive of the best results. This is largely due to the fact that the gardener in the later month is less rushed and can devote more care and attention to transplanting.

There are only a few rules to be re-

membered, but, if success is expected, these rules must be observed. In planting deciduous trees, many of the ordinary precautions may be slighted, but in planting evergreens—in May or in August—some precautions must be taken or failure will follow.

First of all, and most important, is the necessity for guarding against exposure of the roots to drying winds or sun. The roots of evergreens are resinous, and if they are permitted to become dry, or are chilled, the sap hardens and does not again soften. From the moment, therefore, that evergreens are lifted from the soil until they are returned to the ground, the roots must be protected. When purchased from nurseries, the conifers as a rule are lifted with a generous ball of earth and this is wrapped in burlap. On receipt of the trees, do not disturb this wrapping until you are ready to set the tree in the hole prepared for it.

Cover the roots at once with soil, making sure that all interstices are filled, and, when the hole is half filled, apply water liberally—four or five gallons to each tree—and complete the filling in.

Spray the tree with clear water, spread a mulch about the roots, and wrap the newly-planted tree in papers or cloths to shield it from the rays of the sun and from the wind. Do not neglect this latter. In many instances, no matter how well the actual planting has been done, this simple precaution stands as a guard against failure. The omission of it, in my opinion, has caused more losses than anything else involved in the transplanting of evergreens. The cover should remain on the plants three or four days—a week is none too long.

It is necessary, too, that the holes dug for the reception of the conifers be fully eighteen inches larger in diameter than the ball of earth in which the roots are encased. Two feet would be better. See that the soil in the bottom of the hole is well loosened and broken up—a pick is a satisfactory and convenient tool for this purpose. Avoid manure, but make sure that the soil with which the hole is filled is of good quality.



The Famous Colorado Blue Spruce, Picea Pungens.

It is difficult to suggest what evergreens should be planted—the selection is dependent in a great measure on the purpose in view and the surroundings. Conifers do not thrive in situations where they are in the path of clouds of smoke and this, naturally, interferes with their successful use in cities. But, where the grounds are ample, this objection hardly holds. Then, again, some evergreens resist the smoke better than others—among them the spruces, arborvitaes and retinosporas.

Among the firs and spruces, the planter will find many varieties from which to choose. Picea alba, or white spruce, picea excelsea, or Norway spruce, and picea pungens, var. Kosteriana, the famous blue spruce, are among the best. The last is expensive, but it is well worth all that is charged for it. The junipers are extremely hardy and are general favorites. The Irish Juniper, or J. Hibernica, is probably most extensively planted.

Construction Details of the Home

Vacuum Cleaning

THE time is fast approaching when no house of ordinarily good construction will be considered complete without some system of vacuum cleaning. If the plant cannot be installed at the time the house is built, provision should be made for it by the introduction of the necessary pipe with outlets at each floor. The expense will be nominal and will avoid difficulty when the system is finally installed.

The apparatus consists of an electric motor, a vacuum producer, an oil separator, a dust separator, dust receptacle, suction main, necessary connections, the hose and cleaning tools.

The system is under perfect control of the operator at all times and the number and variety of cleaning devices, make it possible to remove dust and dirt from any position. Special brushes are provided for floors and walls, some with bristles sufficiently stiff to scrape off the dirt which is sucked up by the hose before it can fall. Carpets and upholstery or bedding are provided for with specially designed tools which not only remove dust and dirt to the best advantage but also odors.





A special pipe carries odors from the system and is connected with the chimney, thus discharging them from the house. The illustration shows a section through a house from basement to second story. The motor, dust separator, etc., are seen in the basement with the vent pipe to chimney and the suction pipe with outlet on each floor for service.

This is a carefully constructed permanent system of the best type. The contents of the dust receptacle are removed in the basement and burned or carried off.

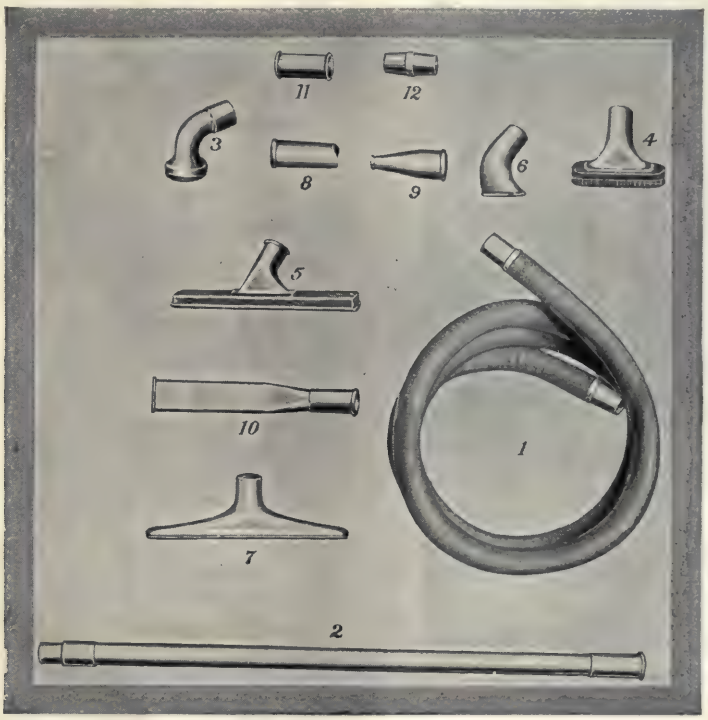
If a machine of the above type is too expensive there are portable devices available which will give excellent service within their capacity. There is of course no ventilation pipe and the apparatus must be carried from room to room. Some are operated by electricity and others by hand power.

It is hardly necessary to disturb the

contents of a room at all in using a vacuum cleaner and if power is supplied no special labor is required to operate it. The work is quickly done and additional help for the purpose is not necessary. The employment of an extra person one day each week at present rate of wages, would soon make quite a sum towards the purchase of a machine.

vacuum hose necessary, the piping system should be more extensive; that is, provided with a greater number of risers and inlets throughout the building than has been the custom in specifications of the past.

Architects and Engineers should specify a piping system consisting of a sufficent number of risers and inlets, so that



TOOLS AND ACCESSORIES.

1. Twenty-five feet non-collapsible light rubber hose, cloth covered. Aluminum tips. 2. Aluminum handle, 4½ feet long. 3. Clothes and hat brush. For any cloth surface. 4. Wall brush. Flexible bristles. To remove dust from wall paper, window ledges, carved furniture, etc. 5. For hardwood floors, linoleum, marble, tile, etc. 15 inches wide. 6. For mattresses, draperies, upholstered furniture, etc. 7. For carpets, rugs, etc. 15 inches wide. 8. Stair-carpet tool. For removing dust from any nook or crevice. 9. Tuft tool. For removing dust and moth eggs from tufts of mattresses. 10. For steam radiators. 11. Hose connector. 12. Hose terminal.

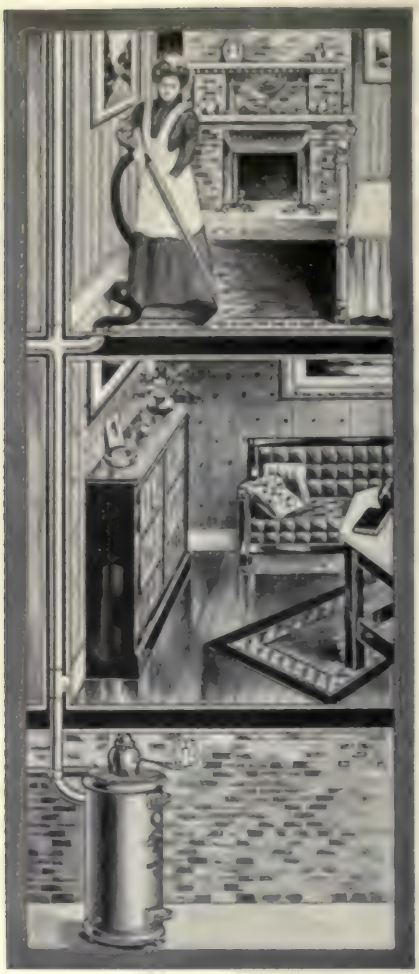
The Use and Abuse of Vacuum Hose.

Much has been said as to the use and abuse of the vacuum hose used in connection with an Air Cleaning System. This particular part of the installation receives the hardest wear and tear. At the same time it is the weakest, and the most expensive part of the installation.

In order to reduce the amount of the system will not require the use of more than 50 feet of vacuum hose in public buildings and 25 feet in residences; thus giving better service at less cost of maintenance.

The Conductor.

The main part of the conductor of a Stationary Vacuum Cleaning System is the pipe. This should be of wrought



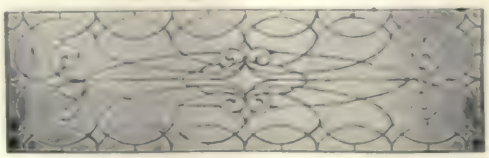
Sectional View Showing Wall Piping of Stationary System.

iron, with a smooth interior free from all fins or burrs, with long-turn, recessed type drainage fittings. The pipe should be of adequate size, so that the vacuum loss will not be excessive, with the use of a velocity not less than 2,500 feet per minute, and should allow the free passage of match sticks, cigar stubs, etc. The pipe inlets should be not less than two inch diameter to allow the use of any standard diameter of vacuum hose.

The vacuum hose should be constructed of light, flexible material, reinforced with spring steel wire. The hose should also be of ample size to allow the free passage of such coarse articles as are spoken of in the preceding paragraph, and to prevent an excessive loss of vacuum due to the passage of the large volume of air necessary at the tool for effective cleaning.

The tool used for cleaning has been neglected by many manufacturers. It is, however, a very important part of the conductor. The tool should be so designed as to be operated with ease and rapidity, and constructed along such lines as to make it adaptable to the particular surface to be cleaned, as well as durable and easily renewable.

The equipment will generally consist of a large variety of tools, designed and constructed for special uses. The carpet and hardwood floor tools are always given the most attention because of their frequent use and severe service. The carpet tool should be of light material, such as aluminum or its equal, with a shoe of some hard substance, such as steel or phosphor bronze for rubbing surface. This will resist wear and will not become sharp and rough; thus the fabric being cleaned will be saved from injury. The hardwood floor tool should be constructed on the same principle as the carpet tool.



Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 358 JOHN HENRY NEWSON, Cleveland, Ohio.
B 359 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 360 G. M. KAUFFMAN, Cleveland, Ohio.
B 361 E. B. RUST, Los Angeles, Cal.
B 362 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 362 CHAS. S. SEDGWICK, Minneapolis, Minn.

Design B 358.

Mr. Newson writes entertainingly about his design for an old thatched roof cottage and says that to properly describe this quaint development of architecture, it is necessary to say a word concerning the growth of style in architecture. "From the begining until this day, builders have been improving and modifying the architecture that has gone before. As the periods passed, each left examples of an art typifying the prevailing life, temperament, climate and politics of its time. So the periods came, developed and declined and out of each decadence grew another period. These periods of styles were far-reaching to the extent of prevailing over the entire civilized world; and at the present day is the very same occurrence going on before us—we are developing an architecture out of the past." If the reader will note the numerous replicas of old work, or developments of the old styles, he can see that in architecture, history is again repeating itself. The much sought for half timber work of England, the free use of the wide shiplap siding of our forefathers in the Colonial days, the use of stucco or cement walls, also of old England, and even the use of brick work and terra cotta as of the old Romans, all prove the above words.

When an old type is followed and properly carried out, true art value is everywhere apparent. When the architectural mass of some line or detail of the old work is reproduced and incorporated in a modern home, or any other building, the sweet charm, reposeful solidity, and general fitness of things, which I call "Character" is predominant.

The home is entered through a lofty beamed hall, at one end of which is the diningroom and at the other the large livingroom. This hall has an elegant art glass ceiling light, tradition not permitting windows in the long roof. The livingroom and sun parlor occupy one entire side of the house; the diningroom occupies the other, while at the rear is placed the service quarters. The porch makes a delightful diningroom in the summer, having direct access to the kitchen for serving purposes, and can be used as a spacious sun parlor during the winter. The livingroom has a large fireplace in a tiled recess, flanked by window seats. The main bath has a tile floor and wainscot. The servant's room, with complete bath is located over the kitchen and is reached by separate rear stairs. There is no attic, but storage space under the roof is accessible and a basement extends under the entire house. Size, 48 by 44 feet. Estimated cost, $10,000.

Design B 359.

This design is especially homelike in appearance, with its wide entrance steps leading up to the front door. The porte cochere in connection with the porch gives breadth and dignity to the whole

house, making it very attractive in a quiet way. The first story and porch are of cement with shingled wall above. The reception hall with its beamed ceiling is admirably situated, having communication with livingroom and library. The livingroom has a beamed ceiling and a fireplace. The diningroom ceiling is beamed and the pantry with entrance to kitchen is conveniently adjacent. From the kitchen one has access to back stair to second story and basement, to reception hall and to rear entry containing refrigerator. Oak finish and floors is used in the principal first story rooms and continued into the second story halls. Kitchen and pantry are finished in birch. The four chambers and bathroom on the second floor are finished in white enamel with birch floors. There is no attic except for ventilation. The basement contains laundry, hot water heater and storage space. Estimated cost, $6,300.

Design B 360.

An inexpensive design for stucco treatment is our next study by Architect Kauffman. It is planned for a small lot, as the house foundation is about 21 by 24. The rooms are quite modest in size, but the livingroom and diningroom are so thrown open that each room helps the other.

The treatment of the roof is very simply a shallow "hip" with wide extending cornice. One chimney in the center of the house serves the purpose of fireplace flue, furnace flue and kitchen range. A small furnace is provided and the basement is divided into vegetable cellar and laundry. Including the heating plant and plumbing an approximate cost to build this modest home is $3,100.

Design B 361.

We present another one of those charming Western bungalows with a rustic air about it, emphasized by the rough brick work in the porch piers and chimney. The bedrooms are on the first floor. There is no attic, being scant space above the first floor ceiling for storage. The house stands 28 by 51 on the ground and is built without basement. It is strictly a summer home or a home for the South. The outside walls are shingled in red cedar; built in this manner with inside finish in soft wood, the estimated cost is $2,250.

Design B 362.

One of our frequent contributors, Arthur C. Clausen, has for his design this month a practical and substantial plan for a square house. The picture is from an actual photograph as the house was just completed. It shows the outside wall as being cement. The foundation wall above grade is built of concrete block. The front porch is surrounded by round colonial columns with spindle wooden balustrade enclosing same.

So much called for in plans of houses of today is a sun room, which has been built out on the east side of this house as shown in the picture and by the floor plan. This room is 10 feet square, has triple windows on three sides. Access to this room is through French windows from the livingroom. It could be nicely used in summer as a breakfast room. The house is planned as an inexpensive one, being perfectly square, 28 feet each way, permitting the use of 18 foot joists. There are few openings or windows in the second story, which help to hold down the cost. This house was recently completed in Minnesota and cost the owner $4,600, including heating, lighting and plumbing.

Design B 363.

Here we have a modern home built on "Colonial" lines. With the broad front towards the street, the main piazza 10 feet wide at the left hand side and open-



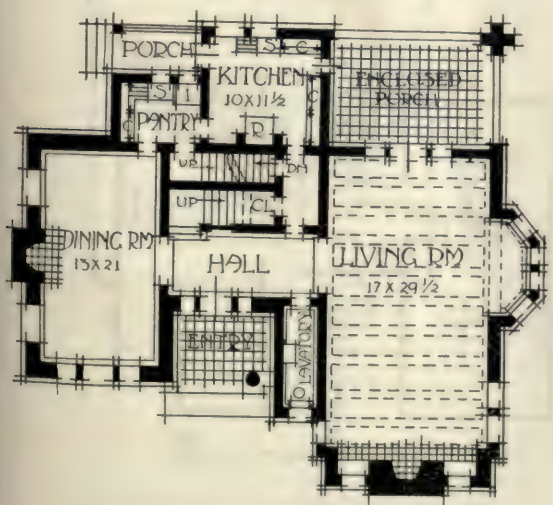
—John Henry Newson, Architect.

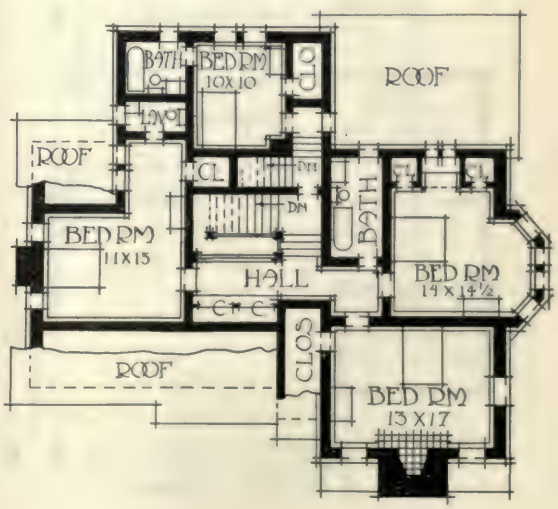
DESIGN B 358

A Thatched Roof Cottage

ed from the livingroom and the dining-room with wide French windows to the floor.

The general appearance of this house is inviting and homelike. The living-room has grouped windows to the front admitting of the sunlight and direct view to the street. The entrance is through a neat Colonial porch with seat on each side and entering through a vestibule into a recess off the livingroom at the right of which is a pretty reception room or den. This room may be used for a music room, back of which and separated only by an open columned partition is the stair-case to second story, made with the





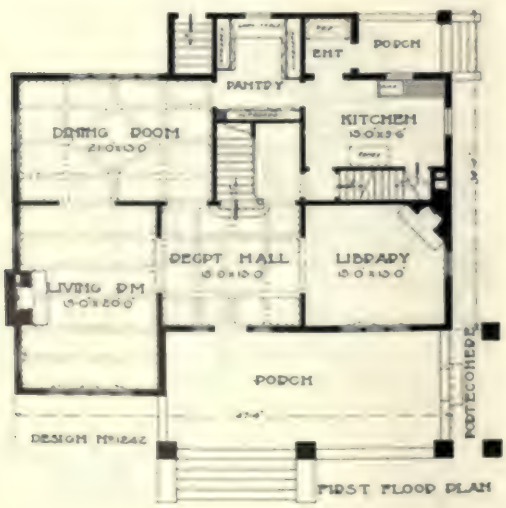


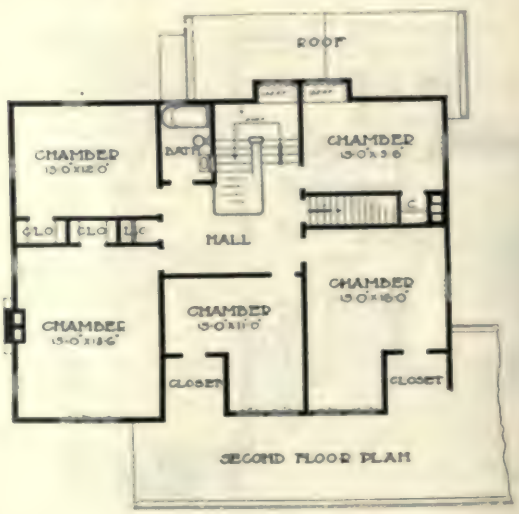
DESIGN B 359

Broad Low Roof Lines and Wide Entrance

combination feature. The diningrooom is back of livingroom and connected by sliding doors. There is but one central chimney, this has flues for kitchen and heater in basement and also for fireplace in livingroom.

The outside is finished with cement stucco, the inside in hard wood, with hard wood floors, good full basement under the whole house. The piazza at side is designed to be screened in for summer use and glazed in for winter, making a





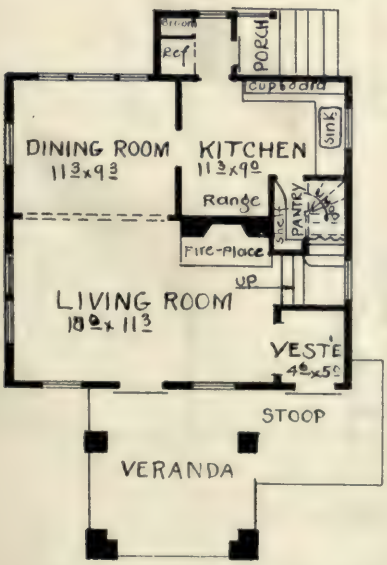


—Geo. M. Kauffman, Architect.

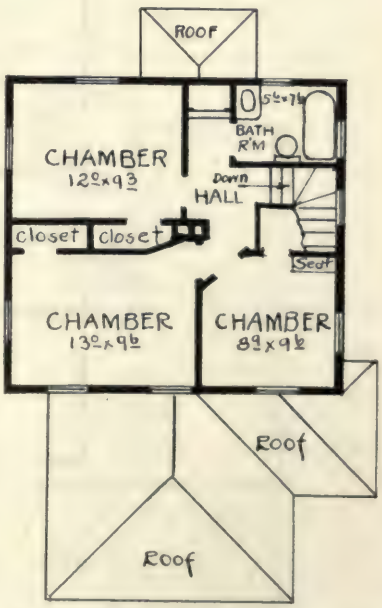
DESIGN B 360

A Small Square Cottage

fine sun parlor. There is a large attic space that can be finished in rooms at small additional cost. The outside trimmings are designed to be painted in dark brown or stained and the roof in a lighter shade of brown, the stucco walls may be tinted in a light cream, with a waterproof wash. Estimated cost, $4,500.



FIRST STORY PLAN



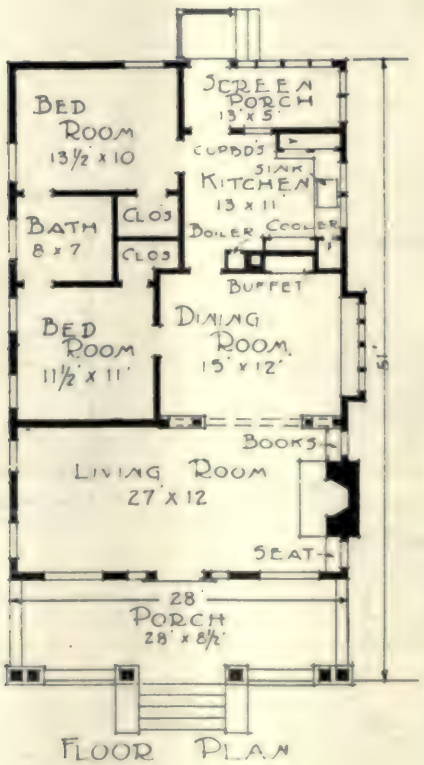
SECOND STORY PLAN



—E. B. Rust, Architect.

DESIGN B 361

Rustic California Bungalow

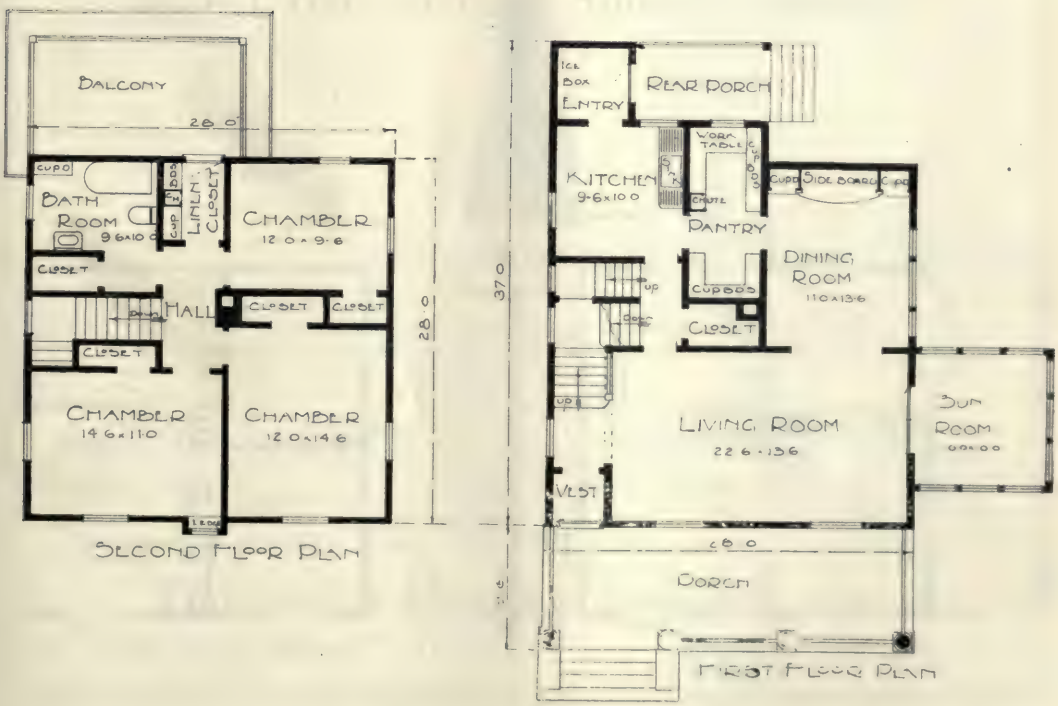




—Arthur C. Clausen, Architect.

DESIGN B 362

Cement House with Sun Parlor

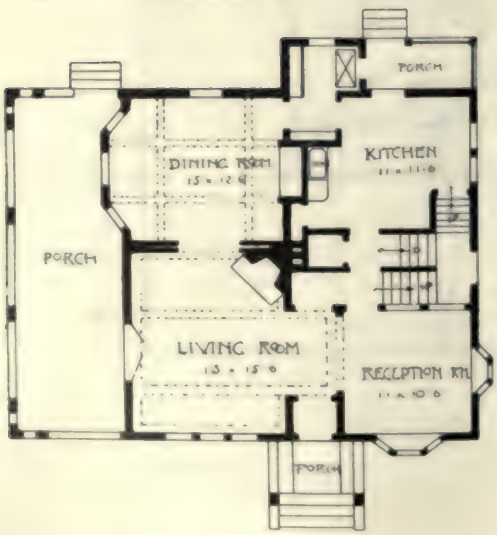


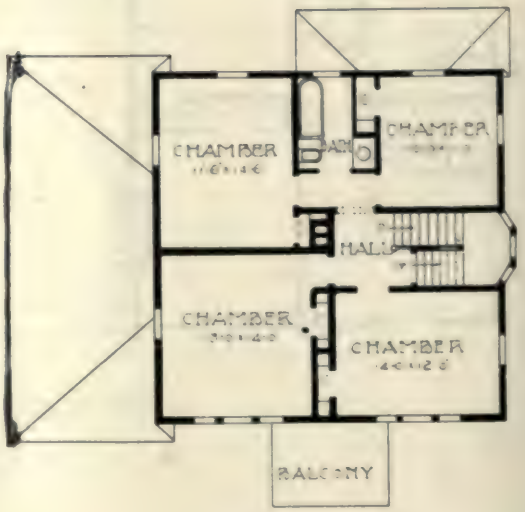


—Chas. S. Sedgwick, Architect.

DESIGN B 363

Modern Design on Colonial Lines





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Curtains and Draperies.

THE writer of these pages has often expressed her disapproval of the conventional lace curtain, as being not particularly beautiful, often very expensive, out of all proportion to its effectiveness, and, when an imitation in a cheap process of fine hand work, extremely inartistic. Feeling as she does, it always gives her pleasure when she can mention something specially desirable, at once good in design and falling in with the very prevalent taste for thin curtains.

In what are technically known as lace curtains there are some effective things to be had in a heavy, deep cream colored Brussels net, with an edge, more or less elaborate, of heavy braid sewed on in scroll patterns. The whole curtain is further edged with a narrow lace-like gimp. The best of them have rather a narrow border whose lines are comparatively straight, and they look very well cut off to sill length and tied back. The fact is not perhaps to be explained but the curtain with a good deal of pattern at the sides and across the bottom seems to demand a French window.

There are a great many curtains in which Cluny or filet lace is combined with fine scrim, generally cream color when filet is used. Some of the Cluny lace comes in a deep ecru tone, and the scrim matches it. When getting curtains of this sort there is a very sensible saving in making them at home, buying scrim and lace and putting them together. The work is easy enough for an ordinary seamstress, and aside from the saving of the cost of making and the dealer's second profit, ready made curtains are all of standard size, and unnecessarily long for the average window, yet although you pay for the surplus length, it is seldom available for any other purpose.

The woven filet nets with heraldic designs are some of them very effective, and not sufficiently close an imitation to be objectionable. They are most useful for hall doors, or for ground floor windows on a city street, as they effectually screen the interior, and should not hang in folds but be stretched on rods, or, on a door, tacked over the glass, with an edging of gimp or lace braid.

The pretty drawn-work scrims, of fine texture marked off with lines of fagotting, are shown in great variety, and are particularly satisfactory for bedrooms, as they can be washed indefinitely. An edging of lace braid gives them an air not conferred by a plain hem. It is impossible to emphasize too much the importance of some finish other than the selvage for a washable curtain. Hemstitched cheesecloth is dignified in comparison to expensive linen scrim hung just as it comes from the roll. Finish always tells, and nowhere more than in decoration.

A really dainty, very thin curtain is hard to find at a low price. At the white goods counters, one often finds very thin cross barred materials, marked off into squares with cords, which wash very well and look much nicer than any curtain material at the same price. We have seen in an old house a four poster hung with a white material almost exactly like these dress muslins.

Sun Fast Materials.

At last it seems to be possible to get colored cotton materials which will not fade with any reasonable exposure to sunlight, although the manufacturers are



Sitting-room in the home of J. R. Fant, Oklahoma, Okla.

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You may not notice it at first glance. In fact, visitors to Mr. Fant's Oklahoma home do not at first see anything unusual—except that the rooms are designed with excellent taste.

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modest about claiming immunity for pink. There is quite an extensive range of colorings and weaves and all are mercerized. All of them are double width and will doubtless meet the needs of a good many people. While intended for draperies, they are also available for pillow covers and other furnishings. They average about a dollar a yard, but will doubtless be cheaper after a while.

Something About Italian Linens.

Linens of all sorts are particularly dear to the housewife, and she knows no keener pang than to watch the decay of her treasures. For that reason she should be interested in the Italian linens which are now to be had in considerable variety. One New York house which imports them points proudly to customers who have had their linens in use for twenty-five years, without a sign of a broken thread.

These Italian linens are all hand woven, grass bleached, innocent of chemicals. The principal stock in trade is towels and sheeting. The toweling is nearly all of the huckaback variety, and of delightful quality. Most of the separate towels are fringed. There is a linen crepe towel as well, also fringed. The toweling can be had by the yard in a variety of widths and qualities. The sheetings, too, are of beautiful texture. The widths, however, hardly conform to American standards, as there is nothing between 72 and 107 inches. It must be remembered that the double bed is unusual on the continent.

Prices are considerably in advance of the ordinary article. Towels, 32x43, with a five-inch fringe, with seven rows of knotting, are $12 a dozen. At the same price is a hemstitched towel, 28x44, also a crepe towel, 27x45. Twenty-seven-inch huckaback toweling is 60 cents a yard, in a medium quality. Sheeting 70 inches wide is $1.95, 107 inches $3.25, with a finer quality at $4, and 45-inch pillow case linen $1.50 a yard.

Another standard article is table linen, also hand woven and grass bleached, fine and heavy, at $4 a yard, with napkins to match at $8 a dozen. A finer grade, called serpentine linen, is $5 a yard, with napkins, 28 inches square, $10 a dozen.

As compared with department store prices, these sums seem large, but it is to be considered that they are asked for materials which will last half a lifetime. If the initial outlay can be afforded, it undoubtedly pays. It must be remembered that all the continental countries are becoming commercialized very fast and that hand industries are bound to die out, so that one may be in the way of accumulating heirlooms.

Sensible Parlor Furniture.

For the average American family sticks to the term parlor, and will have none of the drawing room, the word or the thing. For the parlor are extremely comfortable sets of five pieces, a couch, an easy chair, a large rocking chair and two small arm chairs, in the modification of the eared shape, which is known variously as the Pickwick or the Sairey Gamp, with mahogany frames, smoothly upholstered in plain or striped olive velour. Or there are sets of the comfortable, overstuffed sort, with high back and sides, known as the Chesterfield. Such a set, of three or five pieces, is an admirable nucleus, about which may gather the subsequent accumulations of chairs in carved wood or willow.

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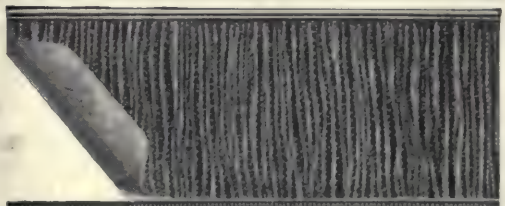


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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

Placing a Red Rug.

V. E. R.—"I am accepting the invitation of your correspondence department by enclosing sketches of floor plans of a new house and asking for suggestions for furnishing and color scheme.

"The living room is finished in chestnut, beam ceiling and a four-foot wainscot. We prefer fumed oak or early English furniture for this room and ask your advise regarding color of trim, walls and ceiling, color of fireplace brick, and some idea of gas and electric fixtures; also rugs and draperies.

"The dining room is beam ceiling and strip paneled below plate rail and finished chestnut. Can we use oak furniture with a rug with brick red as a predominating color?

"What shall we do with the hall. Second floor is finished white with mahogany doors. It would be convenient to furnish the guest room in curly birch and the large bedroom with a brass bed. This is not imperative however, and leave the matter to your good judgment."

Ans.—It is a pleasure to suggest decorations and furnishings for so admirably planned an interior. The living rooms are ideal, in proportion and arrangement. The chestnut trim will take on a soft and beautiful color with a fumed oak stain. When the stain is applied, stand over the painter with a club and don't allow him to rub it into the wood. It will be sure to be too dark. Have him try it on some corner first, till you get the right depth of stain.

We like your choice of furniture, but would advise the fumed oak for living room and hall. There is a fumed finish where the brown tone is slightly grayed, that would be fine with the fumed chestnut.

In the dining room, if furniture is oak, a brown oak stain could be used on wood trim which would perhaps tone in better with the furniture. There would be no conflict between the red rug and the oak, but it would be unfortunate to spoil that beautiful southwest dining room, which cries aloud for blues and greens. Can you not use the coppery red rug in the upstairs den, which is a northeast room and demands a warn treatment. With wood trim painted a soft olive green, a blended paper on the wall, blend of greenish and coppery tones, with brown wicker furniture upholstered in rich cretonne to harmonize the hangings of same at windows—it would be delightful.

For the living room, a gray cloth in grayish green is suggested, above the wainscot with ceiling tinted greenish ivory between beams. For hall a rich tapestry paper in blues and greens, above wainscot. Use ivory ceiling and blue and green rug, plain green rug and hangings in living room. In regard to use of birch furniture in guest room with white and mahogany trim, it would be a mistake. The birch can be used with a deep cream wood trim, doors and all, and deep cream and amber with light greens in the furnishing. The brass bed can be used with the white and mahogany.

Treating a Columned Opening.

A. M. T.—"My reception hall and dining room are to be in the brown mission, furniture and woodwork. All floors stained a light natural color. Then, the living room is furnished in mahogany and I wanted the woodwork to be mahogany also, but, as I want a colonnade between the living room and the hall, I don't see how I can bring the two stains together on the colonnade. Someone suggested using white woodwork in all the rooms, but I don't want that. It has also

'mid pleasures and palaces



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been suggested to me to stain the wood in the living room mission, too, but I don't think the brown stain is pretty with the mahogany furniture. What would you suggest?"

Ans.—Replying to your letter of a few days ago, would say that inasmuch as your living room furniture is mahogany, we should advise keeping to the original plan and using a mahogany finish on the woodwork also. If you are careful to secure a dark brownish mahogany and not a red tone to the stain, there will be no want of harmony between this room and the rest of the house.

A dark mahogany, penetrating stain will give you a satisfactory result. The columns of the opening must, however, be finished the same as the hall woodwork and the casings also. Make your break in the stain on the inner wall of the living room.

A Color Scheme.

C. M. K.—"Have a new 7-room house nearing completion and would appreciate suggestions as to color scheme for decoration. The house faces south.

"What kind of wall paper would harmonize? Would you have golden-brown or warm tan for vestibule and living room, with a slightly lighter shade of the same color for dining room? No plate rail in dining room, etc."

Ans.—Your interior appears to be extremely harmonious and well thought out as far as you have gone. We like your plan of carrying brown and ecru tones through the rooms, but in the southwest living rooms we should modify these warm tones by the use of a plain green rug and green upholstery and hangings. Let it be a lichen green, which is grayish in tone, not a grass green. You will be pleased with the combination. Such a rug could be had in a Wilton velvet for $40.00, but you would require a 10 by 12 size.

In the vestibule and on the stair we would use a mixed green and brown carpet. A leaf brown grass cloth would be lovely on the living room wall, but if this cannot be afforded then one of the soft tapestry designs in leaf brown and ecru shades, the same in hall. The ceiling tint of ivory should extend through the cove down to the moulding.

In the dining room the walls could be in warmer, golden browns and yellow silk or crepe at the windows. Living room windows pale ecru scrim with a little finishing edge. The radiators should match the walls as nearly as possible. We should prefer amber or yellowish glass for dining room light fixtures, and the open bell shapes rather than the closed. The finish of the lower hall woodwork should be carried up to the head of the stairs, and the break to white woodwork made there. The painters are wrong in painting baseboard and stair on landing white. It should be removed to wood and refinished oak stain.



HOME BUILDERS—SOME HELP

Beautiful homes—characteristic homes are not accidents, but the outgrowth of careful planning. The biggest help in the preliminary steps is obtained from a good architect's book of designs and floor-plans from which to cull ideas.

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Some Reflections on Left-Overs.

JUST at present the public is being exhorted with much enthusiasm to buy various manuals of the art of using left-over food. To an impartial mind these handbooks seem to complicate rather than simplify the endless problem of economy. Invariably they presuppose the possession of a store closet well stocked with all sorts of sauces, condiments, preserves, nuts and dried fruits. It is of course delightful to have such an emergency shelf, or closet, but for the family which must calculate closely the margin of expense necessary to keep it up is quite out of the question. When it is considered moreover that the leftover, however carefully prepared, is seldom as palatable to most people as fresh food, does it not seem as if the best way were to eliminate the remnants?

It is perfectly possible to provide for a family on a sufficiently generous scale and have comparatively little food to carry over from one day to the next, and it is certainly the ideal way. The French, who are past masters of economical living, are adepts in the art of providing enough and no more. Their shops sell single portions of all sorts of cooked food, and cuts of meat are much more closely divided than with us. If there is any food left over the mouth of the soup pot yawns to receive it, and nothing is amiss to that.

Until some one discovers an edible animal about the size of a cat, small families will be obliged to serve roast or boiled meats a second or even third time, but no special hardship is involved, and he is a very unusual person who does not enjoy an occasional dinner of cold rare roast beef or lamb, while corned beef and ham are both better the second day. When a large piece of meat persists until a third day, there is always the joyous possibility of a pie, with a rich crust and layers of raw potato thinly sliced alternating with equally thin pieces of meat, the whole well moistened with gravy.

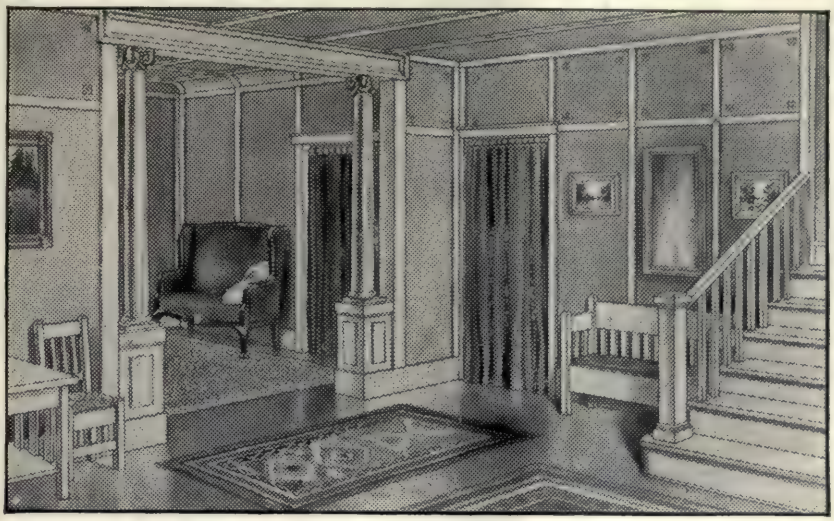
Exactness in Ordering.

Ordering by telephone, or through a clerk who comes to the house is responsible for a good deal of undesirable surplus. The butcher naturally gives himself the benefit of the doubt in cutting, and the four pounds ordered becomes five and a half sent. If you see that the available roast of beef is too large you may change to lamb or veal, but he sticks to his orders and beef it is. You are always at an unfair disadvantage unless you stand in front of the counter yourself. Then, too, most people are hazy about the bulk of meat in a pound, or the number of pounds in a particular cut. The latter is almost impossible to determine except by personal observation, as is also the relative proportion of fat and lean. All these considerations go to show the benefit of marketing in person.

As to the quantity of food to be allowed to each person, it might certainly be determined by actual experiment in the course of a week. The rule for catering on a large scale is variously stated as a third or a half pound of meat per head, per meal, but this amount is influenced by the other things served at the meal. The lower classes who eat few vegetables

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and do not ordinarily have dessert, eat a great deal of meat, and their food budget is relatively expensive. While no two families are exactly alike in the amount of food consumed per capita, each has its fixed standard, which can be ascertained, and which varies little from week to week. With this kept well in mind, it is an easy matter to buy just enough.

It is, of course, necessary to have a margin, unless one lives in a desert. The unexpected guest may turn up. But this margin can be secured by a liberal provision of vegetables, which can always be utilized the second day with a minimum of trouble. A very successful boarding house keeper told the writer that she found it good economy to have superlatively good bread, as less was eaten of more expensive articles.

Soups, puddings and other liquid or semi-liquid articles of food should be accurately measured. Make just enough pudding to fill the required number of saucers. Have a ladle holding one portion of soup and measure the water, milk and thickening in it. Measure the number of cups of coffee required for breakfast in putting in the water. The coffee will be better and the temptation to warm it over will be removed. A graduated glass measure is invaluable, and one can be had marked for pounds as well as for liquid measure. The average cook book is written with the cup as the standard measure, approximating to half a pint. But in practice cups vary greatly in size, and a tumbler is a more accurate measure, as almost all tumblers hold about same quantity. A tumbler to be used in measuring liquids which may be hot can be annealed by boiling it in cold water, letting the temperature rise gradually.

Cooking Fruit in the Casserole.

We hope that all of our readers are sufficiently up to date to possess at least one casserole. Of course there is a wide choice in them, and it is quite possible to pay a substantial sum for one in brown or dark green, glazed inside and out, and with a white lining, but it seems as if one lost all the charm of the pretty foreign fashion with these dressed up affairs. The real thing is made of flowerpot clay, of the same color inside and out, although the inner surface is glazed, and has a hollow handle jutting out sharply at one side. They are to be had without covers, and for the average family the three-pint size is the most generally serviceable. Devotees of the Arts and Crafts make covers for casseroles of elaborately wrought copper, but the evenness of the temperature is better maintained with the thick earthenware covers which are fitted to each size. One of the necessities, as the casserole is brought directly from the oven to the table, is a plate to set it on, of some ware in harmonizing color. A plate of one of the English wares which have an elaborate decoration in brown is very good indeed, but best of all is the brown Spanish earthenware, coarse in texture and not unlike the red clay in color.

While the casserole is principally used for cooking meat or its combinations, it is also the best possible thing in which to cook dried or evaporated fruit. The dried fruit should be soaked, but evaporated fruit needs only to be washed, covered with cold water, to which the necessary amount of sugar has been added, and cooked, closely covered for four or five hours, in a very slow oven. The same treatment is excellent for a plain rice pudding without eggs, for an Indian pudding, or for a brown Betty. Two hours is sufficient for most puddings.

A Butter Economy.

By the end of summer butter is already rising in prices, and it behooves the housewife to look after leakages. One way of saving butter is in making the various sauces for meat and vegetables. Instead of the time honored use of a tablespoonful of butter and a tablespoonful of flour, use a tablespoonful of lard heated to boiling point and cook the flour in this, later adding the seasonings and stock or hot water. If the sauce is made with water, a tablespoonful of butter will be needed, but it must always be remembered that the first tablespoonful in which the flour is cooked contributes nothing to the flavor of the sauce, but is all absorbed. Lard is considered by many cooks to take the flavor of the seasoning better than butter, and it is also

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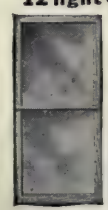
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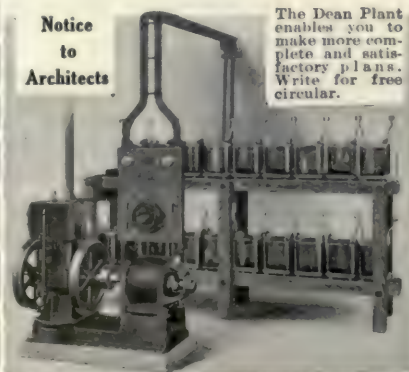
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very much less likely to burn. Another economy of butter is the use of what the government handbook on vegetables and their cooking calls savory drippings. The fat from fried sausages, bacon, ham and pork and from roast veal and chicken and veal, also uncooked poultry fat and pork trimmings are tried out, care being taken to prevent their burning, and while they are cooking a small onion, a pinch of summer savory and one of thyme, teaspoonful of salt and a little pepper are added to each half pint. After the fat is tried out it is strained and used instead of butter for seasoning vegetables. Too many people do not realize the economy of butter it is to have a good made gravy with a roast. The art of making one is very simple, and is adds nothing to the cost of the meat, as it utilizes what a servant is pretty sure to throw away. Even if the grown-ups do not care for gravy, the children are pretty sure to like it. If it has no other market it can be used for sauce for spaghetti, which has been cooked with cheese.

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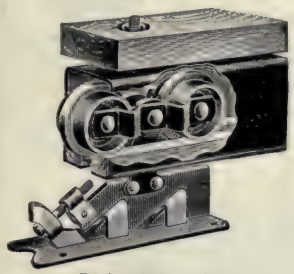
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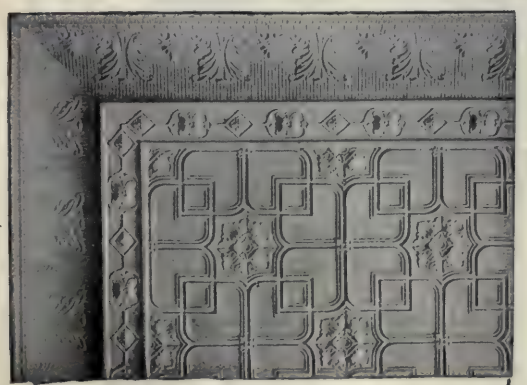


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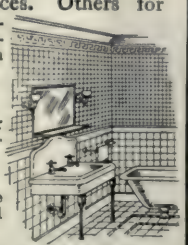
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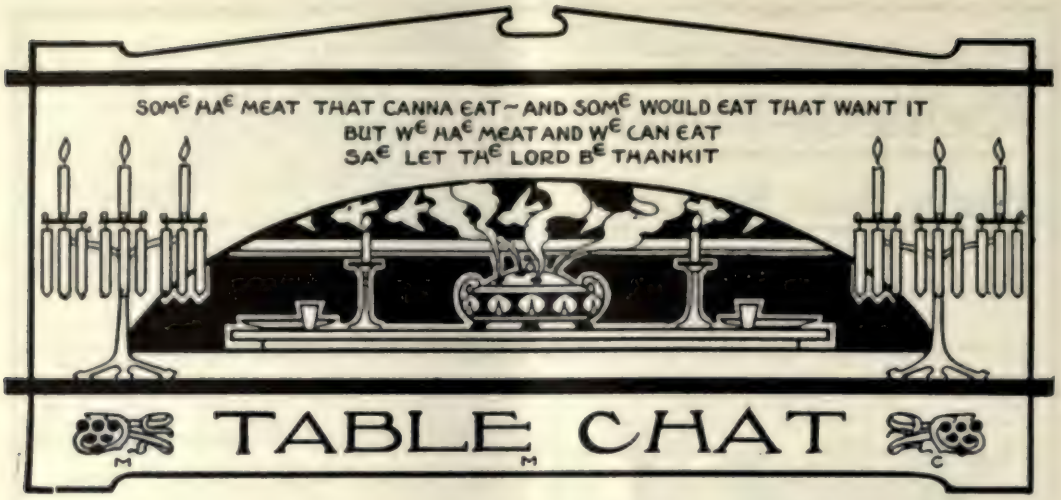


TABLE CHAT

Desert for Dog-Days

By Beatrice d'Emo



CUP CAKE BASKETS FILLED WITH BERRIES AND WHIPPED CREAM.

ICE CREAM made of pure rich ingredients and flavored or mixed with fresh fruit is one of the most wholesome and nourishing of desserts, and thanks to the greatly improved freezes which are now sold at prices to meet almost any demand it is also one which can be easily and quickly made. Homemade cream, provided the best ingredients are used and the freezing carefully done, should be far more delicious than the confectioners' product which is flavored to suit the generality of tastes, hence is often under or over sweetened, and as it is made in large quantities the purchaser is not always assured of its being absolutely fresh, none of which objections holds for the home kind.

An exceedingly good general recipe for ice cream, one which can be used for most any kind by adding the desired flavoring or extra ingredients, is made by heating one quart of single cream to the scalding point in a double boiler, then dissolving in this a level coffeecupful of granulated sugar. Let cool, then flavor to taste or add prepared fruit or nuts.

For any of the fruit water ices use a pint of the strained fruit juice to a pint of water and a pint of the clarified sugar. If the mixture is made sweeter than this it will not freeze hard.

A pleasant substitute for ices will be found in frozen fruit, any kind of which, after it has been picked over if berries, or pared and stoned if the larger variety, may be sprinkled thickly with powdered





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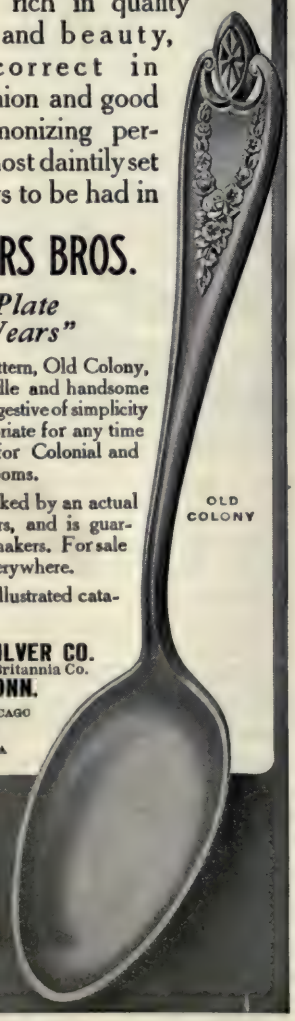
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sugar, then put in the can of the freezer which is then covered and buried in ice and salt until serving time.

Now a word or two as to the attractive serving of the iced dainties. Large fine oranges may have the tops cut off, as shown in the illustration, the pulp carefully extracted, then the cavity filled with hard-frozen cream or sherbet, the top replaced and tied on with baby ribbon of a contrasting shade. Cup cakes turned upside down can have the centers scooped out and replaced by strawberries, raspberries, sliced peaches or bananas and French vanilla ice cream piled over all, making a tasty variation of a shortcake. Halves of peaches, pears or apricots may be thoroughly chilled in the freezer can, then laid in baskets made of sponge or other plain cake which has been cut in rounds or oblongs, the outer part slightly coated with jelly, then powdered with blanched and pounded almonds or desiccated cocoanut, and whipped cream forced through a tube to make a fancy border. Cantaloupes of small size and good flavor may serve as cups to hold vanilla ice cream. Large peaches, dipped in hot water to remove the skin, then turned hollow side up, may be filled with French ice cream.

Fruit mousse may be made with any kind of fruit that can be reduced to a pulp by being pressed through a sieve. To make a quart of the mousse, whip a pint of rich cream until it is very stiff and put to drain on a turned-up sieve. The liquid that drains through can be again whipped to a froth. Obtain a cupful of fruit pulp, which thickens with powdered sugar to the same stiffness as the whipped cream, then mix with the cream, using a fork. Pack closely in a mold, cover and bury in crushed ice and salt for four hours. A pretty effect may be obtained by first lining the mold with ice cream or water ice, then putting in the mousse.



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Strawberry, raspberry, currant or peach whip is a delicate dainty made by mixing a cupful of the fruit juice, expressed as for fruit ice cream, with half a cupful of powdered sugar or a whole cupful, if quite sweet desserts are liked. Stir this into a pint of rich cream and beat with an egg beater until light and thick. Pile in sherbet cups or a large glass dish and serve lady's fingers or other plain small cakes with it. This was a dessert much liked by our great-grandmothers, and certainly has plenty of merit to recommend it.

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Why Asbestos Roofing Has Become So Popular.

THE satisfactory result of building construction is dependable to a great degree upon wearing, fire and water proof qualities and upkeep of roofing. The selection of a roofing which will not be too expensive in price, and yet wear for years without painting or graveling and furnish absolute protection against fire and climatic conditions, has always been a study of considerable moment to engineers and contractors. The list of roofing materials manufactured to-day is a long one, and some of them embrace excellent features. Men experienced in roofing problems look upon asbestos roofing as a natural protection against all destructive elements because it is made of a natural mineral that has already proved to be practically indestructible by not being injured by exposure to the elements for centuries; and the wearing and elastic qualities of the material are not deteriorated in processes of manufacture, or preparation for roofing uses.

Fire cannot get through an asbestos roof from the surface: and from underneath, only after the sheathing boards and timbers have burned away and allowed them to fall, the roofing being carried with them. The saturated and cementing oils cannot be drawn from asbestos roofing by the heat of the sun, therefore it retains the waterproofing oils indefinitely. In the test which was recently made, the intense flame of a blow-torch was held on a piece of this roofing for nearly an hour without burning or injuring the roofing any more than to blacken it.

Owing to the increasing demand for a cool roof, the white surface asbestos roof is especially valuable where comparatively low summer temperatures are desired on the inside of the building. An actual test made at a large Cleveland, Ohio, clothing factory in the summer of 1908, showed a difference of eighteen degrees between a black and white surface roof, the thermometers being suspended four feet below the under side of the roof.—Amer. Car. & Builder.

Roughing of Cement Porch Floor.

The trouble which has been caused by the scuffing of the cement porch floor and the breaking up of its surface as stated in the following communication, is evidently due to improper mixture and imperfect workmanship. We give in full the correspondence that has passed on the subject between this office and a reader of KEITH'S.

Gentlemen:

I had a concrete porch constructed about a year ago; the floor is red with a border of gray around it. The surface is now roughing up, the grains of sand being quite distinct, and on the steps some small surface cracks show. What treatment would you advise me to give the porch to counteract these two faults? I am a subscriber for the magazine.

Ans. Without knowing definitely the aggregate used in your floor or the method of mixing, we are unable to state definitely the cause of such failure as you state in your letter. If the aggregate used in the wearing surface was weak or dirty possibly it is that which is now breaking down under continual wear. In such case it would hardly be possible for you to apply any thin coating which would prove of any value to your floor. Under those circumstances it would



Residence of E. W. Twaddell, Devon, Pa. Roofed with Asbestos "Century" Shingles by E. S. Parson, Philadelphia. Architect; and Simon Heister, Wayne, Contractor. From an Artist's Drawing

Fire loss from *inflammable roofs* costs the property owners of this country over Forty Million Dollars a year—fires that start outside the building, due to somebody else's hard luck or carelessness. You cannot change your neighbor's habits—but you can guard against them. Roof with

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These Shingles are made of reinforced concrete—of cement reinforced in every direction with interlacing asbestos fibers.

They are made by the "Century" process, which distributes the asbestos *evenly* in the cement.

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He can supply then in Newport Gray (light gray), Slate (blue black), Indian Red and Veneered Red (Indian Red face with a gray back, cheaper than the solid red).

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CEMENT—Continued

probably be advisable for you to remove the top coating of the floor and resurface it with a new and stronger mixture. To do this successfully you should exercise considerable care and precaution in order that the new surface will properly bond to the old base. This surface should not be less than 1½ inches thick and the old top should be chipped away sufficiently to allow this depth.

In applying this wearing surface you should thoroughly clean the surface upon which it is placed, by first brushing with a stiff broom and water, followed by a weak solution of muriatic acid. All trace of the acid should be removed by a hose and the surface kept continually damp until the top coat is applied. To insure a good bond the old surface should be coated with a cement grout having the consistency of cream, and the top surface applied before this has had an opportunity to set. After the work has been completed it is advisable to sprinkle the surface from two to three times a day, for a period of at least 3 days, in order that there may be sufficient moisture for the concrete to set.

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¶ OAK FLOORING $\frac{3}{8}$" thickness by $1\frac{1}{2}$" or 2" faces can be laid over old floors in old homes, or over cheap sub-floors in new homes at a very low cost. **It is cheaper than carpets or Pine Flooring.**

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¶ There is a **solid satisfaction** and **lasting pleasure** in the **substantial** and **dignified appearance** of OAK FLOORING.

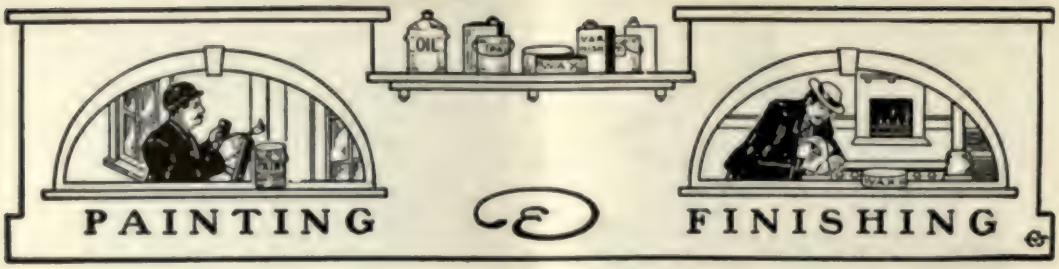
¶ A carpenter or handy man can lay OAK FLOORING successfully. It is very **profitable** work for any carpenter.

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Cracks in Plaster.

EVEN the best workmanship and materials are not always a guarantee against cracks in a new plaster ceiling. Settlement of foundations and shrinkage of joists are two insuperable causes. Where only superficial hair-cracks result they may be easily filled with plaster of Paris, which will make them impossible to detect under a subsequently applied decoration or papering. But if the cracks are wide and numerous, filling them is apt to make a patchy ceiling and is besides a tedious task. A better remedy is to stretch cheesecloth over the entire ceiling, pasting it in the same manner as paper is applied. Owing to the accommodating elasticity of the cloth, both existing and future cracks are covered, and the material has besides an interesting texture which asserts itself through the painting, where that method of decoration is used. If the walls of the room have a frieze and picture mould, the cloth can be carried down the sides and its edges hidden under the mould. Where a very rough texture is desired a heavier cloth can be substituted.

However, because a remedy has been found, one should not be careless about the causes of ceiling cracks. They should be in mind when the frame of the house is put up and guarded against, as far as possible, by setting timbers and studding in such a way as to reduce shrinkage to a minimum. By this is meant reducing the horizontal wood. Ordinary pine or spruce will shrink about a half inch to the foot across the grain; therefore, as little as possible should be used in that position. The shrinkage of wood on end is almost imperceptible. A well framed house with studs running from sill to roof and with ledger boards notched into the studs, would require only the floor beams on the horizontal. A poorly framed house, such as contractor-builders usually put up, would have short lengths of studs end to end at each floor, with two inserts of joists to carry the floor beams—in all about twelve inches of horizontal timber with a shrinkage of half an inch. This, in the whole height of the house might run into several inches and no end of ceiling cracks. This careful framing up is one of the differences between an architect's house and a builder's.—Home Beautiful.

A very thin veneer of wood which is backed with a suitable paper by a special process and can be hung like wallpaper, is known as "Filmwood." It comes in figured mahogany, quartered oak and black walnut, and may be finished either in wax or in rubbed or polished varnish if desired. It has been used with excellent effect in paneling the card-room at the Chicago Athletic Club and is an excellent material for panel work in living-rooms, halls and diningrooms at a fraction of the cost of wood paneling.—Wall Paper News.

Papering Rooms.

The quantity of paper required for a room is calculated in various ways. First, it must be remembered that a roll of paper on which all prices and estimates are given, measures, when the selvage is removed, 1½ feet wide and 24 feet long. Although many American papers come in lengths half as long again as this, and English papers 48 feet instead of 24, the single roll remains the standard recognized measurement for wall coverings. A roll, therefore, contains 36 square feet. By taking the square feet to be covered in the room and dividing by 30 instead of 36, the result will give the number of rolls re-



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These stencils have been designed by an experienced artist and decorator after long study in Holland, Germany, France and Spain.

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and pure linseed oil they are just the thing to give the finishing touch to the painted walls—they are the last word in decorative art.

The designs shown are simple rather than showy and they are made for those who care for refinement in art.

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quired, with safe allowance for the waste which will occur in cutting around windows, doors and mantel, and the amount discarded from the end of each piece.

Another method is as follows: Assuming a room to measure 14 feet x 12 feet, and to contain two windows each 3 feet wide, and one folding door 5 feet wide, the perimeter of the room comes to 52 running feet; with openings subtracted it nets 41. Paper being 1½ feet wide, twenty-eight strips will be required, to which should be added about three pieces to cover waste in matching the pattern and otherwise fitting around the openings. This makes a total of thirty-one strips. Assuming the room to be 10 feet high, a single roll will supply two strips, and therefore sixteen rolls may safely be counted as necessary for the room.

Finish Hardware.

The hardware field is bounded on the east by artistic design, on the west by solidity, on the north by variety and on the south by despair. The despair comes from the impossibility of making a choice in such a bewildering array of splendid material. It is the old trouble of the donkey in the clover field—there was so much of it that he did not know where to begin.

Cost.—In an eight-roomed house one can reasonably expend from $60 to $150. Most are well content with the $60 outfit. Solid bronze is expensive, but life is possible without it. The manufacturers have put such a finish upon cheap goods that there is no trouble in trimming a house of the size given for even $40 and having good artistic material.

Butts or Hinges.—It is hardly necessary now to warn builders not to use a butt that does not have a loose joint, so that the door may be lifted off without taking out any screws. Any other kind would be hard to find. In Europe they are probably still unscrewing their hinges because Noah did it in his time; in the United States a door is lifted off in a few seconds.

As already noted, doors more than 7 ft. high should have three butts. Not less than 4x4 in. is the common requirement.

A rather good hinge lately put on the market has one side cut into the door jamb in the ordinary way and the other screwed on the face of the door. It is an ornamental finish.

Varnish.—You may ask what varnish has to do with hardware, and the reply is that it often has too much to do with it. If hardware is put on before the varnishing it should be unscrewed to let the painter get his work done. It is not only easier for him, but better both for the appearance of the wood and the working of the hardware.—The Building Age.

Prepared Roofings look as much alike as two peas in a pod. The best place to test their worth is on a Building As a result there is no other one article in your stock which you should be so careful about buying; nor is there any other article that will more quickly undermine your business than an Inferior made Roofing that will not give satisfactory results.

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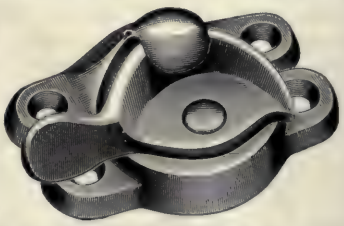
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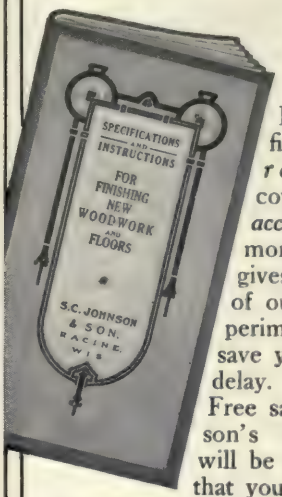
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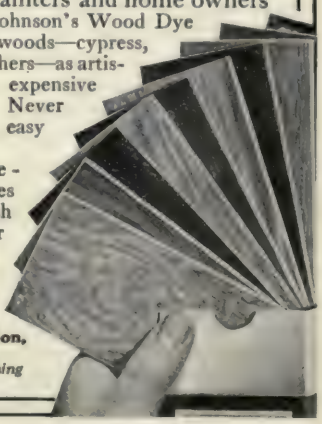
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Heating, Lighting and Plumbing

Dust in Relation to Heating.

By Konrad Meier.

(Extracts From Paper Before Heating Engineers.)

IT is a popular notion that steam and hot water systems give a different sort of heat. Engineers would define this more correctly by stating that various methods of heating will produce different air conditions. The old-fashioned devices are still considered by many people to be more wholesome, even though less efficient than the modern apparatus, of which it is often said that it does not ventilate, the dead air and stuffiness being attributed generally to the lack of air supply incidental to heating. Partly out of this idea has grown the popularity of the indirect system, but now complaints are heard, that through heating, and even tempering, by stacks, the air will lose its natural sweetness and refreshing qualities. The recent tendency to oppose plenum ventilation on the part of the medical profession appears to be the result of such observations.

Engineers themselves will have observed, especially in public buildings and schools, that even a generous plenum supply will not always make the occupants forget the desire to open the windows. Heated but unoccupied rooms are often found stuffy, even after long vacancy, when a slight amount of natural ventilation should suffice to keep them sweet. Everybody has noticed the stifling air of ill-kept empty railroad coaches which is not altogether caused by overheating, nor by previous occupancy. In such cases the foulness of the air cannot be due to lack of ventilation alone.

These circumstances would indicate a cause of vitiation aside from the well-known sources and explains in a measure the demand for purer air which has really arisen and become general only with the introduction of the modern ways of heating.

* * *

Dust, in fine, impalpable form, is the most common medium for the dissemination of disease germs, dust on the streets, in the air, on the floors of public buildings and in the carpets and draperies of our own homes. And dust must be prevented if we are to be really clean,—really sanitary.

In many of the larger towns the old fashioned street sweeper has already given way to the flushing tank which washes the filth into the sewers instead of sending it broadcast into the air to poison and pollute.

The really sanitary air cleaning system must be stationary and equipped with an outlet for the exhaust of the foul air entirely outside the building. A device which can be carried from room to room, even though it may do fairly satisfactory cleaning, can not remove the really dangerous elements from the atmosphere of the house because it must of necessity exhaust the germ-laden air back into the room. But a properly installed stationary system, with the machine in the cellar, and piping of not less than 2½ inch diameter (sufficient to allow free passage for large volumes of air and dirt) rising through the partitions with inlets at every floor, with dust chamber thoroughly air-tight and with exhaust flue out-of-doors for the polluted air, will give ample guarantee against dirt and the bacteria that give birth to the greater percentage of the common diseases of the human family.

Not only the carpets, rugs and draperies benefit from the regular use of the stationary air cleaning system, but the family clothing, furs, beds and bedding, and every nook and cranny that would bid defiance to the broom and dustpan, all may be kept hygienically clean with little effort and trifling expense by the

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The art of making this roofing, left behind by fleeing Moors driven out of Spain centuries ago, until 1910 could not be made practical for the modern home, despite its alluring beauties.

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IN these days of summer heat, prepare for the chill of an early winter by installing an Underfeed Furnace or Boiler. Plan to cut your coal bill next winter ½ to ⅔. **ACT NOW.** Don't wait for the fall rush. Write for FREE Furnace or Boiler Booklet and fac simile letters from users of

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Cheap slack soft coal and pea and buckwheat sizes of hard and soft coal, yield in the Underfeed *more* heat, *cleaner* heat and more *even* heat than highest priced coal burned in any other heater.

Coal is fed from below. Fire is on top and sides, in direct contact with the most effective radiating surfaces. In top feed furnaces fresh coal blankets the fire, causing alternating chill and overheat.

In the Underfeed, smoke and gases pass up through the fire, are consumed and make more heat. The Underfeed insures *perfect* combustion. No smoke, no soot, no clinkers and but few ashes.



Cut-Out View of Underfeed Furnace

W. N. Chandler, University City, Mo., writes: "My coal bills, ranging from $105 to $120 a season until I installed an Underfeed, were reduced to $48 the first year; $44 the second and $56 the past severe winter. I have no trouble whatever in heating my house to any desired degree."

If you are about to build; if your furnace or boiler is unsatisfactory; if you still depend on stoves or grates—write for furnace or boiler booklet, fac-simile testimonials, heating plans prepared for you by our Engineering Department and estimate of cost—all sent FREE. Dealers also write for our proposition.

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searching nozzles of the stationary air cleaning system, operated by the turning of an electric switch in the wall.

Such cleaning as is accomplished by a high grade stationary air cleaning system adds at least fifty per cent to the "life" of a rug or carpet. The explanation of this is to be found in the fact that the powerful suction removes the myriads of tiny sharp edged particles that cling like so many multiple-edged tools inside the very fabrics, and which no amount of sweeping with brooms can dislodge.

The cost of operating a thoroughly high class stationary vacuum cleaning system should not exceed six dollars a year while the initial cost of installation is moderate.

Effect of Vitiation by Heating.

The elimination of the ozone and whatever loss of oxygen may occur, probably have no distinct and traceable effect on health. They represent the general drawback of indoor life, not serious in itself, probably because we have long since become inured to it. The situation is different in regard to the contamination of the air by fine, dried dust, which has become general more recently, through prevailing methods of heating. This may be clear if we remember, that the old-fashioned tile oven, the ordinary free standing, well-polished iron stove, or the open fireplace depend on their effect largely on radiation, and that the heating surfaces are readily accessible and apt to be clean. This cannot be said of the hot-air furnace, nor of indirect stacks, nor of certain styles of radiators, and least of all of the screened direct surfaces.

While the public may have become indifferent to the immediate sensible effect of dust contamination, because it is so general, it is nevertheless a real nuisance. The prevalence of chronic ailments of nose and throat would indicate that we are not immune to it. It is one of those elements which have eluded the ordinary air tests made with the idea of determining the need of ventilation. The quantities are too small to be called a poison often noticeable by odor. Under extreme conditions, when steam is turned into a dusty radiator or stack, the ammonia may become very disagreeable. Circulation incidental to heating keeps a certain amount of dust in motion, which would otherwise settle down, and will therefore add certain elements to the air we breathe.

As proof of this we need to call attention only to the visible tracks left by the dust, on walls above radiators which are sometimes deflected by shields, but should be prevented in other ways. It is by no means likely that live organisms are destroyed to any extent by the ordinary forms of heating apparatus. This depends on higher air temperatures or on steam itself. Furnaces, except in red-hot condition, which is undesirable in other ways, and radiators, therefore, cannot be considered as sterilizers. They merely dry the dust, stir it up and keep it in motion while the heat is on. Considering this, we are forced to admit, that heating increases the bacterial contents of the air.

Favors Moderate Temperature of Heating Surfaces.

The safest way to prevent the chemical adulteration of air through decomposing of organic matter would appear to be a moderate temperature of heating surfaces. With clean surfaces and dry air, acording to V. Esmarch and Nussbaum, there will be no vitiation with temperatures up to 160° F., and none to speak of until the surfaces are near the boiling point. Under less ideal conditions, where more or less dust is to be expected, the temperature should be kept down to about 160° F. or lower, as a rule, excepting an occasional rise to 180° F. during a cold spell as unavoidable and of minor importance.

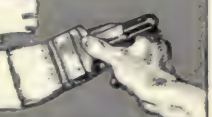
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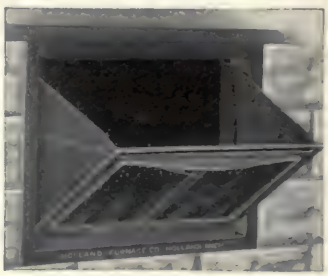
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they are usually false and cheap-looking as to finish. The best finish enamel is the most sanitary, and in its turn would encourage proper self-assertive disposition in place of the unfortunate habit of hiding.

Radiators should have fair spacing between loops to show the dirt and to make it likely that it will be removed. They should not be tucked away in corners.

More Rigid Restrictions for Electric Wiring.

The city council of Minneapolis will consider a suggestion for the extension of the use of iron conduits for electric wiring, to prevent mechanical injury to the wires and to decrease the fire hazard. It is proposed to require the conduits for both open and concealed wiring in the fire limits, and in a number of classes of buildings, especially public and semi-public buildings. Among other amendments proposed are clauses providing for revoking by the city council of electricians' licenses for just cause; requirement for steel fuse cabinets exclusively to supplant wooden cabinets; provision for automatic shutters on motion picture machines to conform with similar mandatory provision in building code; revision of other wiring regulations; requirement that all electric signs shall be constructed entirely of metal and specification for porcelain sockets on lamps near conductors of electricity. The last provision applies particularly to installations in bathrooms with the tile or marble finishing or floors, in which a person is especially liable to shock because of standing on or near materials tending to "ground" electrical current.—Imp. Bulletin.



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SPLINTERS AND SHAVINGS

Are the Lumbermen Responsible for the Increased Cost of Building?

The following comparison of building costs now and ten years ago is so interesting that we print it in full:

Kansas City, Mo., Jan. 29, 1912.

Editor St. Louis Lumberman:

We are enclosing herewith a detailed statement of the cost of erecting two houses in 1903, as compared with the same houses in 1912, which shows an average cost in 1903 of $3,387 and 1912 of $3,925.

However, part of this difference is taken up by reason of the fact that in the houses built in 1912 there was included stone work on account of porch, which did not appear in 1903; also cement floor or porch; and in the electric work the estimate of 1912 included wiring entire house, while in 1903 the same item simply covered an electric bell.

Referring the matter to one of our other yards, our manager makes a statement, as follows:

"Labor of all kinds is higher now than ten years ago; for instance—in 1904, I let carpenter work on a six-room frame house for $375. I am now paying $475 for the same kind of a job. This is about 25 per cent advance; and I think the same will be true of other classes of labor, from excavation up."

He further states that the lumber and millwork is not over 25 to 30 per cent of the cost of a modern house, and as the selling price of material has not advanced more than 2 or 3 per cent, it is not fair to hold the lumber manufacturers or retail dealers responsible.

The increased cost of the same class of buildings that was being constructed ten years ago is not as much as some agitators would have the public believe. The principal increase is in the cost of labor and the added comforts that go to make up the modern house. Ten years ago we furnished material for a frame house for $512, and duplicated the same in 1911, $521—less than 2 per cent more than ten years ago.

Yours truly,

L. L. SEIBEL,

President Badger Lumber Company.

Itemized Statement of Cost.

By Badger Lumber Company, Kansas City.

Two Houses.

	1903	1912.
Carpenter work	$1,170.20	$1,400.00
Lumber and millwork	2,223.03	2,300.00
Stone work	482.85	*600.00
Plumbing	530.00	600.00
Brick work	479.30	550.00
Shades	36.00	40.00
Furnace	240.00	240.00
Decorating	186.46	200.00
Plaster	404.85	500.00
Grading	68.94	80.00
Painting	370.00	400.00
Cement work	210.00	†400.00
Tin work	70.00	80.00
Mantels	91.00	100.00
Sodding	74.16	100.00
Gas fixtures	72.00	120.00
Art Glass	60.15	60.00
Electric bell	6.50	‡80.00
	2)$6,775.44	$7,850.00
	$3,387.00	$3,925.00

*Stone work now includes stone porch.

†Cement work now includes cement floor for porch.

‡Electric work includes wiring entire house.

—The St. Louis Lumberman.

Double Glazing for Soundproofing.

An English builder has tried the plan of double glazing windows in sick rooms, studies, lecture rooms, etc., with a view to excluding noise from without and with notable success.

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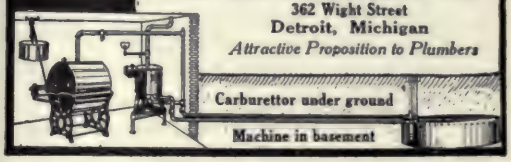


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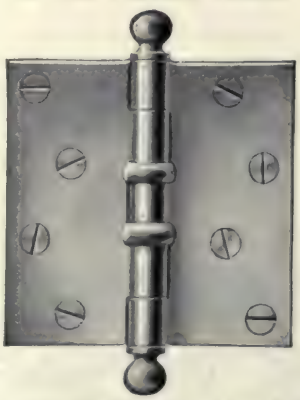
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New Booklets and Trade Notes

Into New Quarters.

THE Winnipeg Branch of the H. W. Johns-Manville Company, owing to their increasing business, have found it necessary to move into much enlarged new quarters at No. 92 Arthur street, Winnipeg.

They will occupy an entire six-story and basement building.

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Porch and Garden Furniture is the unique booklet which we have received from The Old Hickory Chair Co., Martinsville, Ind., in paper covers that capitally reproduce the braided rush seats of this furniture. The illustrations within are most attractive and irresistible. The line has been extended to embrace interior country house furniture as well as porch and garden, some of the pieces rivaling fumed oak or mahogany in workmanship and design. Swing seats and even summer houses are also built by this company, the largest in their line in the world.

* * *

The Carpenter Spring Shade is extensively set forth in their handsome booklet just received by us. There are numerous illustrations showing this awning installed, also its practical operation. The book is willingly furnished on request by Geo. B. Carpenter & Co., Fifth avenue, Chicago.

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Modern Closet Construction, issued by the Watrous Co., Chicago, is a booklet of more than ordinary interest not only to architects and builders but to the ordinary householder, as the differences in old and new construction herein set forth are plain even to the lay understanding. Who has not suffered from the faulty action of the old syphon-jet type of closet plumbing? The Watrous Duojet will be hailed with joy by the public. Read their booklet and learn its advantages.

* * *

It is really surprising that so utilitarian a subject as hardware, can be set forth in such attractive shape as the new booklets and catalogs issued by the different manufacturers present. Take for instance the Sargent catalog devoted entirely to union lock sets, a truly wonderful specimen of design and press work. In addition, they issue a separate booklet devoted entirely to colonial designs for special use in colonial houses, showing not only door handles and entrance designs but sideboard, bookcase and other details. It would seem the last word had been said till we turn to the dainty booklet of the Corbin Co., with its chaste press work in keeping with the refined designs illustrated.

* * *

The Yale & Towne Manufacturing Co. in an artistic blue and gray booklet tell us about Yale locks, with designs appropriate for colonial, Elizabethan and mission architecture.

* * *

The Prudential Heating Co., Akron, Ohio, issue a new edition of their catalog of their Down Draft System of Smokeless Combustion which is of interest to all home builders.

* * *

The Biltmore Nursery, North Carolina, also sends us their Hardy Flower Garden, a catalogue so unique and attractive as to be well nigh irresistible.

KEITH'S MAGAZINE

ON HOME BUILDING

WITH WHICH IS CONSOLIDATED

THE JOURNAL OF MODERN CONSTRUCTION
IDEAL HOMES MAGAZINE

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Courtesy Wall Paper News. COLONIAL TREATMENT APPLIED TO HALL IN A MODERN SUBURBAN RESIDENCE.

KEITH'S MAGAZINE

VOL. XXVIII SEPTEMBER, 1912 No. 3



C. E. Schermerhorn and W. K. Phillips, (Associate) Architects.

RESIDENCE OF MR. GEO. W. MASSEY, LAMBERTVILLE, N. J.

A New Jersey Colonial Residence

By Watson K. Phillips

IF those who intend building a home could realize the importance of taking ample time to go into the matter thoroughly before the contract is awarded, they would save themselves considerable expense and disappointment. The house illustrating this article was not built until after the plans had been studied by the client for nearly a year.

The desire of the client from the beginning to end was to have a distinctive home rather than an impromptu house. The owners were as enthusiastic when the house was finished as they were the day ground was broken. They had a quantity of fine Colonial furniture and the rooms were studiously arranged for its accommodation. Each closet, the dressers, location, size and arrangement

of windows and doors were all given especial attention. The commission to design such a house for such clients was one to the liking of any architect, for all interior arrangements were suggested by the clients but the designing of the architectural forms was left exclusively to the judgment of the architects.

The Colonial style was followed as closely as possible, consistent with practical requirements. The house is constructed of up-draft re-pressed stretcher red brick laid in Flemish bond. In order to break the sharp line at the ground the base was made of local granite with a beveled water table. The entrance porch is connected to the side porch by an open terrace. The roof is of Vermont green slate and the valleys, gutters, etc., are of copper.

Upon entering the Colonial doorway, a vista is at once obtained of the main portion of the first floor. At the rear of the hall a plain Colonial staircase leads to the second floor and from there continues to the third floor. On the main landing there is a beautiful leaded glass window with a fan top effect which has been designed in harmony with the main entrance side lights and transomes. No color was permitted in the design, the effect required being obtained by using different textures of white glass which was arranged to set off the geometrical design to the best advantage. Under the staircase a toilet has been conveniently planned. A secret closet is also provided under the staircase for overshoes, umbrellas, etc. Fixed seats (under which radiators are concealed) have been provided on either side of the main entrance door.



Hall in the Massey Residence.



Colonial Window with Fan Top on Stair Landing.

Particular consideration was given in the plan arrangement for conveniently entertaining guests. Instead of one large opening, two smaller doorways were provided from the hall to the salon so as to permit easy and free egress.

This finely proportioned salon is lighted with a massive Colonial chandelier. The formal appearance of the mantel is relieved by a well selected color scheme of hand-made Moravian tile, each tile having an individual tone and shape of its own. It is to be noted that the radiators, while not entirely concealed, are set in

chases under the window sills in such a manner as to be hardly noticeable. The fine old carved sofa, Sheriton chairs and tables, are heirlooms of the family.

The library and dining room are located to the left of the hall, the former being finished in quartered brown stained oak; the dining room is finished in birch and cherry, stained to harmonize with the mahogany furniture. The leaded glass transome over the side board is enlivened with a painted scene giving just the needed touch of color. The fireplace facings and hearth are of Moravian tile.



HALL IN SIMPLE COLONIAL DESIGN.

The floors on both first and second floor are of the finest quality of selected quartered white oak, each board showing full flakes. The salon, hall and entire second floor are finished in white enamel. The doors are veneered with mahogany.

The service portion of the house is in some respects the most interesting of all. A built-in refrigerator is provided in the pantry arranged so that the ice may be put in from the rear porch. A block tin pipe coil is placed in the bottom of the ice chamber and is connected to a private drinking water line which is independent of the town water supply. Outlets connected with this line are also provided for the kitchen sink and main bath room lavatory. The dresser has glazed doors and adjustable shelves, one end being arranged as a table leaf closet. The cellar stairs are placed so that they are adjacent to both the main and rear portions of the house.

The kitchen arrangements, which in main were suggested by the client, have been carefully studied and well thought

out. The most interesting feature is probably the large dresser at the end which has doors that are really small closets. The shelves are supported on movable cleats so that they may be raised or lowered at will, thus providing the maximum amount of shelf space. Every housewife knows that dresser shelves are seldom, if ever, arranged with regard to what they are to contain. Instead of the movable cleats supported on ratchets, metal plugs, such as are used in bookcases, could be used to advantage and at trifling extra cost. The zinc lined kneading board and the bread and meat cutting boards are novel features. Most housewives find that the standard height of 2 ft. 6 ins. for the sink is too low. The sink in this kitchen is set 3 ft. above the floor. The window sill over the sink is of slate so that anything may be laid upon it without fear of leaving an unsightly mark which would occur had a wood sill been used.

The hot water circulating boiler is placed in a closet where shown on the plan and is connected with an automatic gas water heater as well as with the range hot water back.

The bed rooms being placed at the four corners of the second floor, have each two exposures. The guest room, as shown in the illustration, is furnished with Colonial family heirlooms.



THE FINELY PROPORTIONED SALON WITH SUPERB CHANDELIER.

Each of the bed room closets has a built-in clothes pole so that the clothing may be hung in an orderly manner on suitable hangers instead of on hooks as is usually the case. By this means more clothing may be hung in the closets than by the old method. Most of the closet doors have full length mirrors and several have drawers for shoes, hats, etc.

The third floor contains three large airy



FIREPLACE IN DINING ROOM.

bed rooms, a store room and bath room. The space above is ventilated by a large dormer on the rear so that these rooms in summer are about as cool as those of the second floor.

The house is warmed by a new type of hot water heating system in which the piping and radiators are decreased in size and the water is forced by means of a generator, to travel through the radiators



THE COLONIAL GUEST ROOM.



The Kitchen Dresser with Adjustable Shelves.

and back to the boiler at a more rapid rate than in the usual method. A constant and uniform temperature is maintained in the house regardless of the weather conditions by means of a temperature regulator. Two or more radiators are provided in all the principal rooms so that the temperature of one room may be reduced if desired, by turning off one radiator without interfering with the temperature of any other room.

The house is amply lighted with both gas and electricity, numerous ceiling and bracket outlets being provided. The first, second and third floor hall lights, in addition to being controlled by switches on each floor, are also controlled by switches in the owner's bed room. Pilot lights which operate in connection with the cellar outlets are placed in the kitchen so that one may quickly ascertain whether the cellar lights have been left turned on by mistake. An indicating switch outlet is provided in the kitchen for connection to an electric iron. A similar outlet is also provided in the sewing room for connection to the sewing machine motor. Outlets are provided on each floor for connection to the vacuum cleaning apparatus in the basement and switches are provided on each floor to control the motor.

This house which contains so many comforts and a few luxuries, is thoroughly representative of the type of residences that are being built throughout the country for the discerning few who want houses that are in every sense a home.



Use of Colonial Antiques in a Modern Interior

Photographs from Mrs. H. A. Breckenridge, Joplin, Mo.

THE collection of antiques in furniture and ornaments is a fascinating and delightful occupation for the fortunate ones who have leisure and means. This pleasant pastime was indulged in by the owner of these photographs, until her collection finally grew to be the furnishings of the interesting house here illustrated.



LIVING ROOM IN THE BRECKENRIDGE RESIDENCE.

The beautiful mahogany and old walnut pieces in these rooms are real antiques and not reproductions. They have been collected at different times and in different places and the ornaments are from all over the world. Some from old Mexico, some from Copenhagen, embroidery from the Orient, and exquisite rugs in the soft colorings that are only found in the real antiques.

The entire house, including the sleeping rooms, is carried out in this old Colonial motif. The front entrance is flanked on both sides by old lanterns, genuine antiques, equipped with modern electric lighting. The interior light fixtures were all made to order from original



Detail of Front Door Showing Old Lanterns.

designs and are in the Colonial silver. The very beautiful ceiling lights have the old fashioned fluted lamp chimney of our ancestors in the center with cut glass pendants underneath and on the sides The wall fixtures in the living rooms have the same fluted chimney shades with exquisite grape design of the old astral lamps, hand-etched and cut. These rest upon a silver base. In the dining room and hall the ceiling lights are supplemented with side fixtures of electric candles in chaste design. Single candles in sconces are placed on the full length mirror of the stair landing.

The woodwork all through the house is in the Colonial ivory white with mahogany doors and with hand rail and treads of the very finely designed staircase in mahogany. This fine hall has the high openings of the Colonial interior, the front door of mahogany in white framing having a particularly symmetrical oval of plate glass nearly the full length.



ANOTHER VIEW OF LIVING ROOM.

All the ceilings are tinted a pale cream, with mahogany beams. The wall decoration throughout is a Tiffany blend paper in a neutral tone of gray.

This background is not only effective in bringing out the antique furnishings but gives the true Colonial atmosphere of plain, neutral walls, light grey plaster being the usual wall treatment of that time.

ing room is furnished in old mahogany. The pieces are very fine examples of the Sheraton style—the most beautiful of the old styles.

The fireplace brick is grey, in harmony with the walls, long and narrow, with wide joints of grey mortar and on the plain shelf stands a mantel clock, an "old timer" of the last century. The comfortable fireplace chair is of the same period,



HALL SHOWING SPIRAL EFFECT IN STAIRWAY.

Two views are given of the living room, one with a vista through of the dining room and its French doors opening upon a sun-parlor. Both living room and hall are furnished with black walnut antiques, the frames in the Empire style of the early 1800's and upholstered in the original black haircloth of that period. Some of the pieces are done in a very beautiful tapestry which contrasts effectively with the highly polished old wood. The din-

when they made those chairs with high, padded backs, which spread generously for wide shoulders and in which a man might lounge and take his ease. The pediments suggesting division between living room and hall are fitted with electrical plugs for attaching any electrical appliance.

This blending of modern comfort and convenience with the feeling of old time simplicity and the good old time styles,

is a most felicitous and successful achievement of a home.

These resourceful home builders bought an old house, completely remodeling it into this refined and charming home of unusual and distinctive character, and a most appropriate setting for their antique treasures. While it is true that it is now possible to buy reproductions from the fine designs of the master craftsmen of two hundred years ago that are most satisfactory and hardly to be distinguished from the originals except by connoisseurs, the possession of the originals themselves is as the owning of a genuine Rembrandt or a very good copy. Happy is the possessor of a real old mahogany sofa, built for some great grandma,

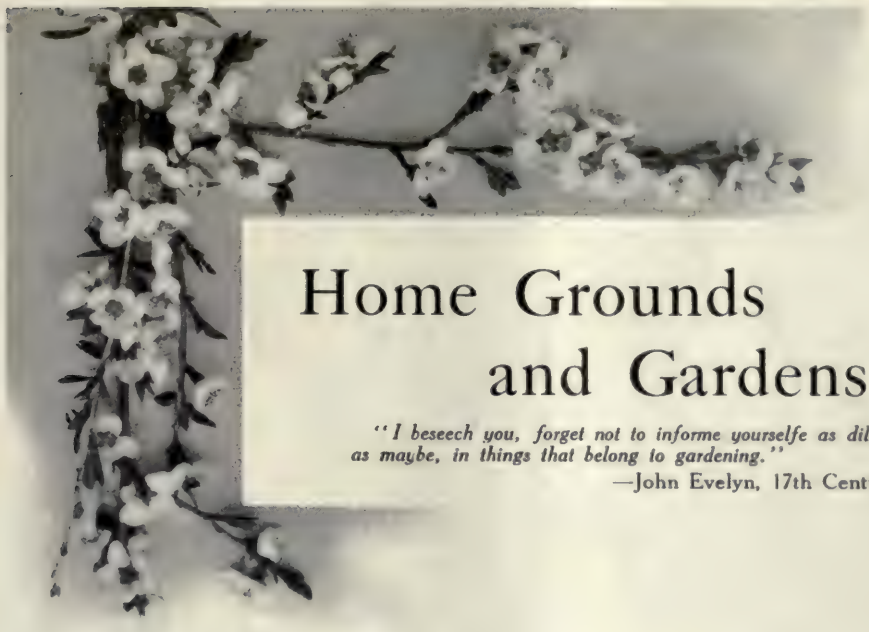
"Severe of angle, high of back, decorous in design,
Its spacious stretch was meant to hold a row of eight or nine."

Set at an angle to a fireplace or against the wall in an ample hall as in our illustration one of these sofas has a delightful suggestion of old time dignity.

One cardinal point, however, should be emphasized—that collectors must be careful to collect things of real value, and that a few really good pieces will give an air of distinction to a room that no multiplicity of trifles or ornaments can possibly do.



DINING ROOM FURNISHED IN SHERATON ANTIQUES.



Home Grounds and Gardens

"I beseech you, forget not to informe yourselfe as diligently as maybe, in things that belong to gardening."
—John Evelyn, 17th Century.

An Old-Fashioned Garden on a City Lot

Photographs by the Owner

THESE pictures are kodak snap shots of a rambling old-fashioned garden—the "back yard" of the handsome grounds attached to a city home on a fashionable street in Minneapolis. The garden is walled in from the street by a tall hedge of the Kinnikinick willow, while the vegetable garden on the other side is separated from adjoining grounds by a prim row of box-elders. Still, the passers-by get tantalizing glimpses round the corners, of the scarlet riot of Poppies and of blue corn flowers, and Larkspur—deeply blue, divinely tall and fair—of holly-hocks that lift their crimson and white heads high above the sheltering hedge, a confusion of Yellow Day Lilies and Callendula, Bergamot and Candytuft, Sweet Rocket and Love-in-a-Mist. Not to speak of the Bouncing Bets that make bold advances to the blushing Sweet Williams across the border. In the early spring there are the Iris—all along the border—purple, yellow, pale blue—with dainty columbine swinging their pink and blue and purple cups on their slender stems:

"Dutch tulips from their beds
Flaunt their stately heads"

and blue Forget-me-nots peep about in the corners.

There is a wire fence covered with sweet peas, and a rustic gate, that lets into this quaint little garden, and inside the gate a queer little brick walk, very narrow and uncertain as to its boundaries it must be confessed, but somehow fitting in with the garden. The brick walk was laid by the bachelor maid who owns the garden, with her own hands, and it ends at the big apple tree in the far corner of the garden. Under the apple tree, when its wide-spread branches are



The Apple Tree in Bloom.

loaded with a pink cloud of bloom, there are little sewing bees and gay games of "bridge." The apple tree—now as big as the barn beside it—was planted ten years ago—a small sapling. So were the birches in the front yard, now a brave, beautiful group, and the silver leaf maple near them. So were the clumps of golden leaf elder, with their feathery foliage and great masses of white bloom; and the white and purple lilacs—now tip-toeing to peep into the second-story windows, and the syringa, with its starry sweets. You see they are all old-fashioned things, but what a "House and Garden" it is! In the sheltered angles of the house grow lilies of the valley in rank profusion, and later in the summer the deep yellows of Callendula—which is only the modern name for marigold—throw their cloth-of-gold mantle across the lily leaves. There are climbing roses over the grey stone of the house, and a scar-



A SCARLET ROIT OF POPPIES AND BLUE CORN FLOWERS.



STREET VISTA FROM THE VEGETABLE GARDEN IN THE REAR.

let honey-suckle that clambers up to the porch roof. But not only are there flowers—there is a 7x9 vegetable garden and out of this intensive farming come wonderful Telephone peas, Country Gentleman sweet corn, early jewel tomatoes, to say nothing of lettuce and radishes—which don't count. This is not the garden of the man who

"For his money got: 1 peck of bulbs, 1 lot of shrubs, 1 quart of well assorted seeds.
He has his garden under way, and if he's fairly lucky, say,
He'll have about the last of May, 1 squash, 1 radish and 1 pea."

Ah, no, this is a woman's garden, and women have a "wy" with them. There is a lot of work about a garden. Morning and evening she hears that insistent call: "Come into the garden, Maud!" but no foolish swain is there awaiting white muslin and a blue ribbon sash. No, the flowers say: "Weed me, water me, pick off my dead seed pods." The corn cries "hoe me," and the beans, "string me!" Al-



The Larkspur—"Divinely Tall and Fair."



The Honeysuckle Vine on the Porch.

ways there is something to do, and a wide-brimmed hat with green under the brim—which it must be owned, is floppy, high boots and rubber gloves are the vain adornments of the gardener. Sometimes one would rather stay on the porch and read; sometimes one's back aches, and in spite of the rubber gloves one's finger nails are sadly in need of the manicure. One has to "spray" and "douche" with compounds like whale-oil soap and nicotine—by no means violet or lavender water—one has to dig up great, fat, disgusting cut worms and learn to "squash" them without a qualm.

But then, think what one can get from this little square of ground of twenty by thirty feet—

"a garden full of bees,
Large dropping poppies and queen hollyhocks,
With butterflies for crowns; tree peonies,
And pinks and goldylocks!"

And think of the sound sleep o' nights; of the health and vigor sucked in from mother earth and father sun; of growing one's own cut flowers and reveling in the house filled with their color and fragrance; of picking your peas from the vines instead of the grocery tub, and of quietly remarking to your guest: "These are out of my own garden!"

This is just an outline sketch, not a working drawing, of what can be had in the way of country out of doors and a garden on a city lot and along with a modern house.

Giving An Old-Time Atmosphere to a Modern Cottage

By Arthur E. Marr

JUST as there are types of men, so there are types of houses, each style appealing to its followers, but there is one form that holds charm for the multitude, especially that vast multitude which spends its days on stone pavements hemmed in with brick walls, and that type is the one that breathes of peace and rest, of quietude that eases the mind and rests the body, of the comfort that comes in a simple cottage surrounded with a wealth of green and bathed in air and sunshine.

It is of such a type that this article treats, and it is to the unlimited thousands that it appeals, for where is the person who is not benefited by such environments, who does not at least occasionally long for the freedom of rural simplicity?

The cottage, for such it really is, with its six cozy rooms and laundry, is located in one of the old picturesque towns on the south coast of Massachusetts, and is a two-story structure. It is modeled after the old Cape farmhouse style, and is clapboarded and painted white with green blinds. The roof line is carried on a long slope in the rear to carry out the old-



A MODERN COTTAGE WITH COLONIAL ATMOSPHERE.

fashioned effect, and the chimney, to be in keeping, is a huge affair, this effect being produced by a false metal lath frame covered with cement. Even the windows adhere to old form, little quaint panes of glass being employed in them. Nor has the general setting been neglected, the picket fence is in evidence, and old-fashioned flowers, the beauties of one hundred and fifty years ago, fill in every available space. The frame is of wood, good sound spruce, the wall boards the same wood matched, and not over six inches wide, and the roof boards are of North Carolina pine. Beehive paper was placed over walls and roof, and the former then clapboarded with clear spruce stock laid four inches exposed to the weather at the top and graded to two inches exposure at the bottom. The roof was shingled with best quality clear cedar. Three dormer windows give cheerfulness to the interior and attractiveness to the frame, as does the porch with its latticework columns. The porch floor and steps are of two-inch Georgia rift heart hard pine laid with open joints.

The entrance to the house is in the center of front, and the doorway is dignified by the addition of two full length panel windows containing small panes of glass.

The first floor has three rooms, coat closet, china closet and pantry. There is also a rear porch which furnishes additional covered space. The hall, as one enters the house, is very attractive, its



THE LIVING ROOM HAS A GOOD FIREPLACE WITH A WIDE BRICK HEARTH.

charm lying in the creation of the stairway. In order to use as little space as possible a spiral staircase was used, and the effect is extremely good.

All the floors on the first floor are double laid, the under boards being spruce covered with floor paper and the top layer Georgia rift hard pine, and these floors are all finished with two coats of best linseed oil. The standing finish for the hall, living and dining rooms is whitewood painted. The kitchen and service portions have North Carolina pine finish treated with three coats of waterproof coating.

The living room is twelve by sixteen feet, contains three windows which illuminate it fully owing to their being placed one on each outside wall, and has a good fireplace with wide brick hearth. The mantel over fireplace is perfectly plain, and the white paint on this, as well as on the balance of the standing finish in the room, has been rubbed down to a satin finish. The ceiling has a slightly warm tint, just enough to escape the trying glare of a harsh white, and the general tone of the paper is soft and blending.

Across the hallway from the living room is the dining room. This room is twelve feet square, contains plate rail, and is lighted by two windows. The white painted woodwork and ceiling have been treated as in the preceding room. Special care was taken in selecting a paper which would not appear to reduce the size of room as so many wall coverings do when the figures are large and the colorings strong. The border above the plate rail is attractive with its quaint design. So much depends on papering it is a point which can be studied over long and carefully, and the result will generally justify the labor. The effect of a whole room can easily be quite spoiled by a hasty or unwise selection.

The kitchen is entered from the dining room by passing through the china closet, this latter place being well supplied with shelves, cupboards, etc. It is also lighted and ventilated by a window.

The kitchen is ten by fourteen feet, is supplied with the usual kitchen fixtures and contains two windows. In order to save space the thirty-gallon copper boiler is suspended from the ceiling over the range. This room, as well as the balance of the service portion, has North Carolina pine wainscoting. The pantry is supplied with shelves, cupboards and drawers and contains a window. The cellar stairs lead from the kitchen. The staircase leading to the second floor, and there is a coat closet located under the stairs, is simple with three-quarter inch rail stained mahogany. The second floor contains three chambers and bath. All the floors on this story are double laid, lower layer spruce covered with floor paper and top layer clear North Carolina hard pine boards not over five inches wide. The standing finish of the chambers is whitewood painted white and rubbed down to a satin finish. The bathroom has finish of North Carolina pine treated with three coats of waterproofing. Tile has been used for the floor, and its many excellent qualities more than repay one for the expense. The tub and lavatory are of enameled iron, which is extremely serviceable and reasonably inexpensive.



DINING ROOM WITH OLD-FASHIONED SCENIC WALL PAPER.

The front bedrooms are, one eleven by twelve feet square, and the other twelve by thirteen feet six inches. They contain closet space and are both lighted by dormer windows on the front and one window each on the side.

The upper hall has been treated in an



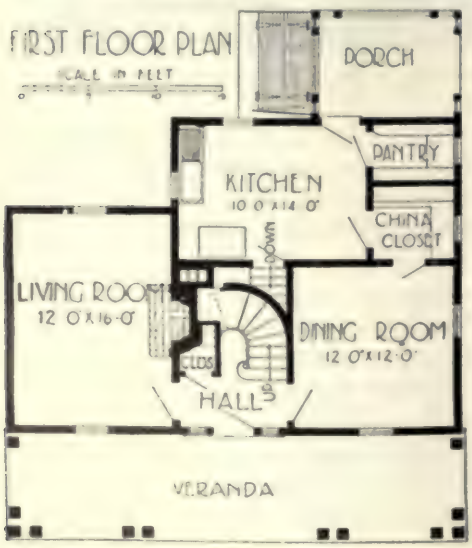
The Old-Fashioned Spiral Stairway.

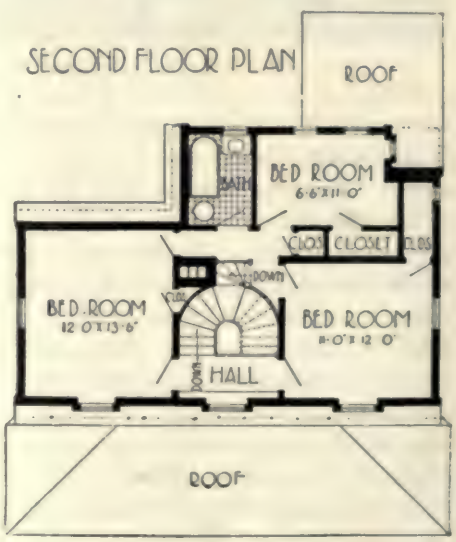
attractive manner. It gets light from the middle dormer window, and there is a long window seat which extends the entire length of hall. Another desirable feature is the petite stairway, a matter of four or five steps, which leads from a landing on the main stairway to the rear of the hall. This arrangement of double stairs permits easy and quick access to all portions of the second floor, and besides affords a direct approach and exit to and from the maid's room. There is a closet space in the hall, and it serves for a linen closet.

An interesting feature, and one which has given the utmost satisfaction, is the system of ventilation in chambers. Each room, and also the bath, contains a twelve by sixteen inch register in ceiling. These registers conduct the hot air into the attic space, where it is taken care of by means of openings placed at either end of house. This simple arrangement reduces heat when necessary and also keeps a constant circulation of fresh air passing through the house.

The cellar has a four-inch concrete floor, and is divided into laundry containing the usual set tubs, etc., coal bins and furnace room.

The whole house, both inside and out, contains the best quality of serviceable stock and was built for both comfort and use; and the lavish display of flowers, the simple varieties arranged in the most informal manner, completes a home that exemplifies to the fullest the true intent of the word "home," a place where one may forget the cares of the outside world amid peaceful simplicity.







THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

Summer Cottages Costing Less Than $1,000

Photagraphs by Mabel Tuke Priestman



A REMARKABLE ACHIEVEMENT FOR $950.

A two-story cottage for $950.00 is a remarkable achievement, and the quaint picturesque cottage of lath and plaster shown is not only beautiful on the outside but equally charming inside. Its beauty is further enhanced by its woodland setting, which shelters it from cold winds in winter. The cottage is built of frame and plastered on the outside only. Very effective are the wooden stripings which break up the walls in a pleasing manner. The double porch with its secluded balcony is an interesting feature of the cottage. It



COTTAGE NO. 2 IS ADMIRABLY PLANNED.

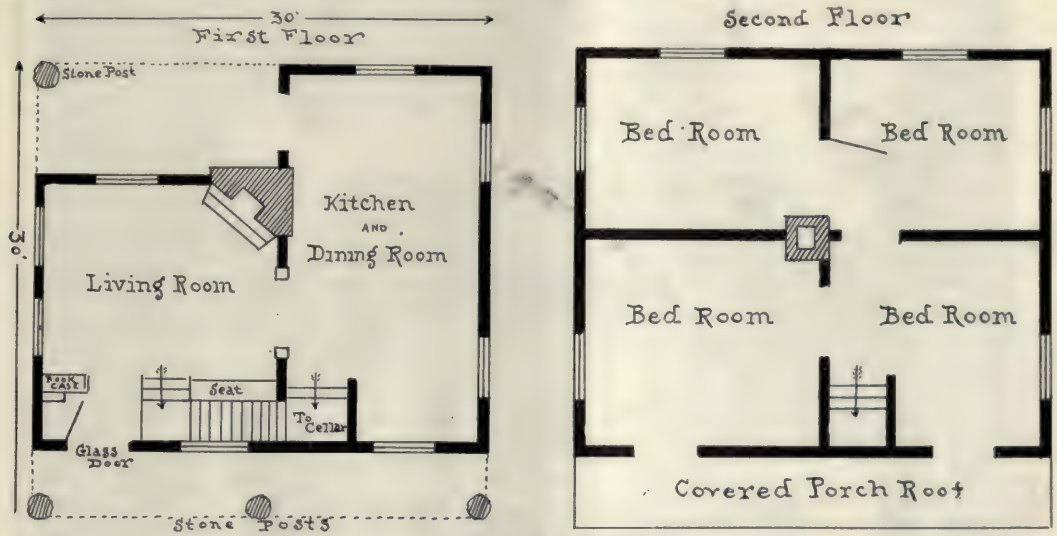
was planned for an outdoor sleeping room. The woodwork is all stained brown and the decorative fret ornament around both porches adds a distinctive note to the architectural features of the cottage, which was designed by the owner. A clever arrangement of heating by steam has been planned along the simplest and most inexpensive lines. The cottage has sitting room as well as dining room and kitchen on the first floor, and four sleeping rooms on the second floor. The walls are not plastered on the inside, but the boards are stained a warm brown and panels of fabric are stretched on the upper walls. It will be noticed, on looking at the illustrations, how everything has been thought of to save expense. No



A COTTAGE OF HOLLOW TILE BRICK AND RED TILE ROOF.

attempt has been made to hide the brick chimney, which extends through the floor to the room above.

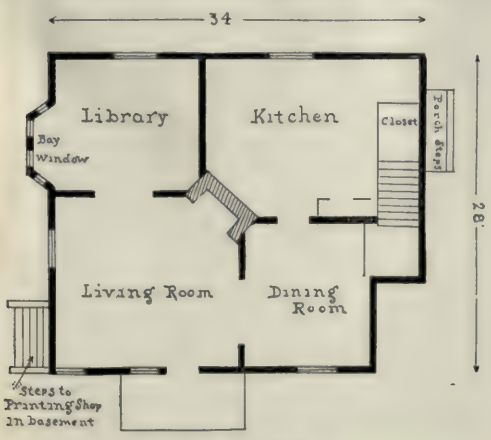
There is a quaint simplicity about the dwelling that appeals to all who visit it, and not the least interesting part is the moderate cost of the cottage.



FLOOR PLAN OF COTTAGE NO. 1.

Lumber, including windows and heating	$370.00
Painting and staining	50.00
Mill work	45.00
Doors and screens	35.00
Building paper	10.00
Roofing	110.00
Hardware	30.00
Plastering	100.00
Miscellaneous	200.00
	$950.00

As the owner understands a good deal about building, he was able to save expense by doing a considerable amount of the detail work himself.



Floor Plan of Cottage No. 2.

Cottage No. 2.

It is admirably planned, with its fireplace in the center of the house, heating the dining room, living room and library equally. This plan allows the convenience of three rooms, with all the advantages of one large one. The walls are constructed of hollow tile brick. The roof was only covered with tar paper for the first summer, but has been covered with tiles since the photograph was taken, bringing the total cost up to $2,000.

The cellar contains a printing shop, which runs under the entire cottage. How few people realize that it is not necessary to spoil the artistic appearance of their homes by having a show room for their business. The owner makes a good living out of his business, but there is nothing to proclaim his occupation, although his wife hangs out an ice cream sign to catch the eye of the traveler.



DINING ROOM IN A MODIFIED COLONIAL HOUSE WITH WAINSCOT PANELING AND MANTEL IN WHITE ENAMEL.

Some Beautiful Colonial Dining Rooms

IN choosing the furniture for the dining room, it will be impossible to find anything in the long run that is either handsomer or in better taste than one of the familiar Colonial designs in mahogany. The American fashion of giving this wood a dull finish is in direct contrast to the English custom of highly polishing or varnishing it. A dining room furnished with a reproduction of the Colonial set, shown in the second illustration, would be distinguished and charming. Silver never shows to better advantage than when placed upon these lovely old sideboards with their deep, rich color.



ELEGANT SILVER ON RICH, OLD SIDEBOARD.

Mahogany dining room furniture claims the allegiance of most people, and certainly it combines dignity and beauty of tone as no other wood does. It is less sombre than oak and it has a more aristocratic tradition back of it. Add to its merits that it is superior to all the chances and changes of fashion and you have a charter of aristocracy indeed. Even its counterfeit, stained birch, is delightful, although a clever eye can detect the difference in grain.

In the best class of shops can be found a large variety of attractive pieces in different woods and which need only good taste in selection and the exercise of judgment as to values to accomplish an effect that is extremely attractive.



Colonial Dining Room Chair.

Chandeliers or center lights are no longer used, except those of crystal which have been restored in drawing rooms of a formal character done in the French periods. Should the light be electricity, side lights hung on the walls in simple and artistic dull-gilt fixtures are good. These lights are shaded by small shades in pale yellow or pink silk, or in cream. Lamps on tables should not be over elaborate and look well with shades made of plain china silk, plaited, with a deep, heavy silk fringe of the same color. These shades can be made at home at about one-half the price charged in the shops; but the fringe, 3½ inches in depth, must be made to order, as it cannot be bought in that depth, and in a variety of colors.

Among the fabrics suitable for hangings in Colonial dining rooms nothing is richer in effect than Venetian red velveteen. This is a beautiful color, and has soft lights and shadows that make it very decorative. This material comes in a fine quality at $2.25 a yard. However, there is another stuff used for the same purpose, and which is much in fashion just now and less expensive; it is mercerized rep. This material is soft and very silky, and difficult to tell from silk, even in touching it. It comes in all colors and hangs in heavy folds, and in a good quality is $1.25 a yard.



MODERN DINING ROOM FINISHED WITH HEPPLE-WHITE MAHOGANY.

How to Build This Bungalow-Cottage for $3,000

(Not including heating and plumbing)



HERE'S THE HOME FOR YOU.

TO build for this sum such a large and convenient house as is shown in the photograph—whose outlines are so pleasing and picturesque, with a floor space of such dimensions and so well arranged, and with the basement accommodations of a five or six thousand dollar house—is an undertaking requiring careful planning and close attention to construction cost. How it can be done we shall proceed to show.

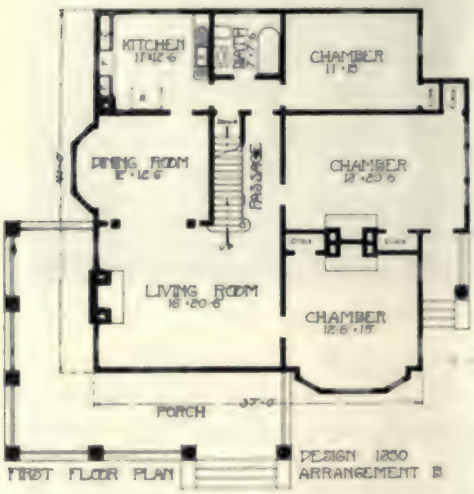
The problem of low cost is also greatly increased by the bungalow character of the dwelling and the consequent larger ground space occupied. A bungalow is commonly supposed to be the cheapest type of dwelling; but quite the contrary is the case. If there is a basement, the increased size means a great deal more excavating and mason work than for the same number of rooms on two floors. Roof surface too, is an expensive item in construction, and this item is, of course, proportionate to the ground space. Heating and plumbing cost more, because of the longer runs required to cover the ground. So that only the most painstaking study and careful planning could achieve a home like this for $3,000.

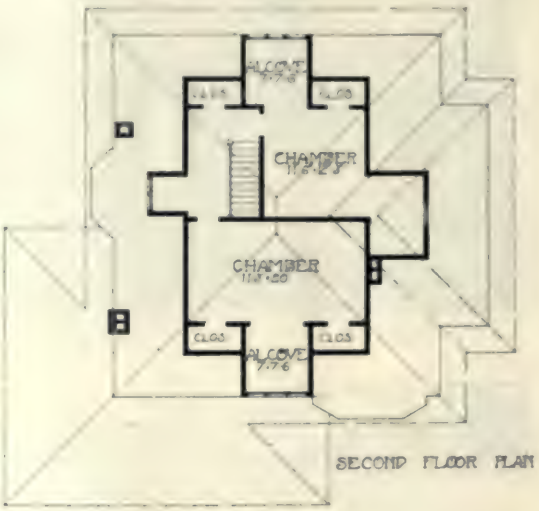
In the first place the floor plan, while providing unusually large rooms, brings them together in such a compact, well studied arrangement as to occupy a ground space of only 37x41 ft. The ceilings are of good height, the first story being 9 ft. 5 ins., and the basement 7 ft. 6 ins. These heights utilize 10-foot studding on 1st floor with single header at floor and double header plates on top. The first floor utilizes joist of 12 and 14 ft. lengths, cutting to good advantage, with 10, 12 and 16 ft. lengths on second floor, and a few 18 ft. lengths over living rooms. The roof rafters are allowed to project showing exposed ends and form the outside brackets under the eaves of

roof, thus achieving a pleasing effect at trifling cost. The rafter ends are left in the rough and stained with white, waterproofing stain.

Poured concrete is used for the foundation and basement wall of 12 inches thickness, and this is slap-dashed above grade to give a good finish, and left in the natural grey.

The exterior is shingled to the roof, and the shingles treated with one coat of very light brown creosote stain. The roof shingles are stained a darker shade of





Havana brown. All the trims, including porch, are painted white.

The chimneys are red paving brick, laid up in brown mortar.

The side entrance also involves considerable extra expense and this could very well be eliminated if it were found desirable.

The ten-foot wide porch upon two sides is a great luxury in such a low cost house, and is made possible by using simple squared posts for pillars and the plainest of 2 inch spindles set 2 inches apart.

The outside trim should be plain for both head and jamb casings, made of ⅞ inch boards 3½ inches wide.

All the interior finish is of yellow pine, and the floors are the same wood of 4 inch stuff, tounged and grooved. The door and window casings should be of 3½ inch boards, the edges simply beveled off and guiltless of mouldings. The baseboard is finished on its top edge in like manner, and beads and moldings must be left entirely out. The result—far from cheapening the interior, renders it more refined. In finishing the woodwork it is planned to use a one-coat soft brown stain in living room, dining room and hall, with one coat of mission-lac applied thin. This gives the effect of a shellac and wax finish at about half the cost, and has the advantage of standing dampness. It is intended to use an oak stain on the floors of main rooms followed by a coat of good floor varnish. The kitchen, pantry and bath room floors to be treated with a floor dressing which penetrates the wood and protects it, so that it will resist the action of water.

The kitchen woodwork is to be finished natural, with two coats of varnish. The remaining woodwork to have two coats of white paint.

One of the several excellent tinting preparations is suggested to be used on the walls of the main rooms, leaving the bed rooms in the natural white plaster. By a judicious use of furnishings, this

effect will be found pleasing, at least while the plaster is unsoiled. A uniform, neutral tint of grey or tan in living room, dining room and hall will lessen the expense of the decorating and produce a very refined effect if properly harmonized or contrasted with color in the furnishings.

The fireplace facings and hearth are of light brown brick with perfectly plain frame and shelf of yellow pine.

The main essentials of the house only, are included in the accompanying cost schedule, which does not provide for decorating, light fixtures or fancy hardware, grading or walks.

Detailed estimated cost exclusive of heating and plumbing but including fireplaces shown.

Excavating	$45.00
Foundation, including cement floor	310.00
Two chimneys, including three fireplaces	203.00
Millwork and lumber	1,005.00
Carpenter labor	503.00
Plastering, including materials but not 2nd floor	275.00
Painting and staining	263.00
Hardware	61.00
Electric wiring	30.00
Miscellaneous, including plans	55.00
Total	$2,750.00
Contractors profit, 10 per cent	275.00
Cost to owner	$3,025.00

If plumbing and heating are figured together with fireplaces add

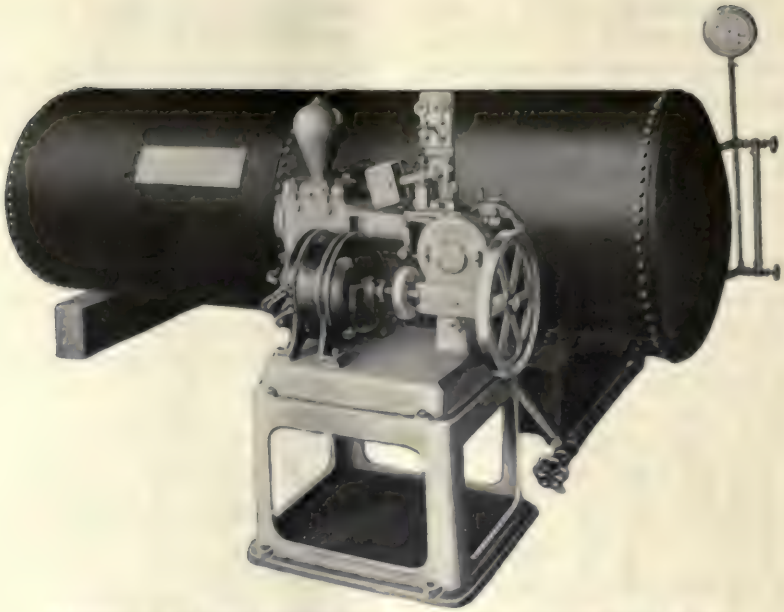
For plumbing	$235.00
For hot air furnace	165.00
Total additional	$400.00

Construction Details of the Home

Water Supply

IN the past ten years great improvements have been made in isolated water supply plants. Where formerly water was forced up, and distributed by gravity the pneumatic tank is now used almost universally. This system of air pressure has now reached a high degree of perfection. The illustration shows one of the best of these systems, with its component parts, consisting of pneumatic tank, water gauge, pressure gauge, relief valve, one pumping unit, one automatic starting and stopping device for motor, line switch, fuse blocks, pipe connections, fittings, valves and bases necessary to complete the outfit as shown.

This apparatus consists of one or more large air-tight tanks and a pump to force water (sometimes air also) into the tank against the pressure of the air in the tank. The air being compressed seeks constantly to expand, thus keeping a constant pressure on the water in the water pipes of the house ready to discharge under pressure very similar to the water that comes from city water mains or a standpipe or elevated tank. The air pressure should be kept at the maximum, that is about all the air that the tank would hold if there was no water in it at all. This keeps up the pressure until practically all the water has been forced from the tank into the service pipes. That this may be done it is convenient to have an air gauge to determine the pressure and a water gauge to show how much water is in the tank, similar to the



SHOWING KEWANEE PNEUMATIC TANK WITH ATTACHMENTS SUITED FOR FAMILY USE.

water gauge on a steam boiler. With these and the necessary valves for convenient operation, including a valve to turn either air or water into the tank, as desired, any house with either well or cistern, or both, may be made to possess all the comforts of a modern, sanitary house. An average family of six persons in a house where water was supplied to kitchen, laundry and bathroom would require a tank of 300 gallons. Under ordinary pressure conditions about 217 gallons will be supplied before it is necessary to pump up again. This is over four barrels of water and would last the average family over two days.

If a greater capacity is needed it is better to install two or more tanks rather than get one of very large capacity. A large tank is hard to handle, expensive to ship, more difficult to set up and requires a larger opening to get it into the basement. If the single tank needs repairs, the whole plant is shut down, which is not the case when two or more tanks are used. A double-acting hand-operated force pump should be used, designed to pump either air or water and should have brass linings and brass valves. A pump may be operated by windmill, gasoline engine, hot air engine or electric power. The air pressure gauge in use is brass faced of the Bowden spring type and the water gauge is of glass with two brass gauge cocks and rubber adjusting gaskets. On the suction pipe should be 1½-inch brass check valve and a ¾-inch brass angle valve on the service pipe. A few minutes pumping should be enough each day with the hand force pump to keep the water supply full and the pressure sufficient to throw a stream over the house.

The pressure gauge may be located in the kitchen, if desired, where it can be observed. The tank may be placed in either the horizontal or vertical position, in the basement or under ground. It is not likely to freeze and a pressure of fifty pounds is equal to an elevation of 115 feet. Most towers for individual plants are not over 40 feet, thus it is possible to maintain a much better pressure for protection against fire.

Principle of Operation.

When a receptacle is spoken of as being empty, it is ordinarily not empty at all —it is full of air. If we have an air-tight tank with an opening in the bottom, and force water into this opening, the air already in the tank, having no outlet, is compressed. When the tank is half full of water, the air which originally filled the entire tank is compressed into the upper half and will exert a pressure of fifteen pounds to the square inch. If, now, a supply-pipe is run from the bottom of the tank, this air-pressure will force the water through the pipe to a height of thirty-three feet. This air remains in the tank. It is compressed when more water is pumped in; and expands downward, pushing the water before it, when water is drawn off.

In the tank the absorbtion of air by the water is enormously increased. The air is actually pressed into the water. The water is as effervescent with air as soda-water is with carbondioxide. The air comes in contact with every particle of water, and every particle of foreign substance is oxidized—burned out. The longer the water stands the purer it becomes.

Gasoline engines are furnished with this system, of unusual economy, simplicity and freedom from trouble in operating. In these engines water is always available and a small stream circulating through the jacket keeps the temperature just right, protects the engine, deposits no scale, makes no steam, takes no space, requires no watching. The water is perfectly clean and can be used for any purpose for which hot water is desired, or it may be wasted, as the amount is small and a few minutes pumping furnishes cooling for an hour's run. When the engine is used for other work, the cooling water is drawn from the tank. Drawing off the few pints of water in the jacket, gives absolute protection from freezing.

The following requirements constitute an ideal water supply:

First—It should not disfigure the landscape.

Second—It should not be exposed to extremes of temperature or the action of the elements.

Third—It should be so located that it will not be a menace to life and property in case of accident.

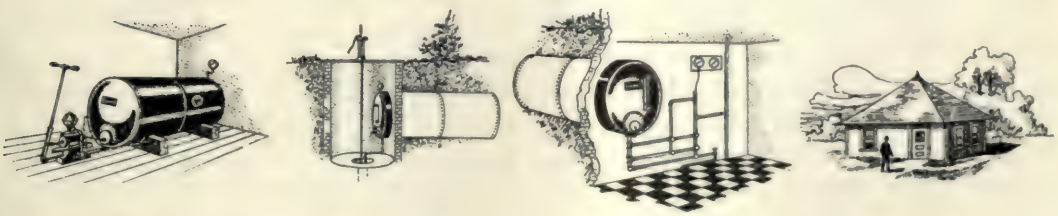
Fourth—It should be practically indestructible.

Fifth—It should be absolutely tight, so that no dust, disease germs, or other foreign substance can get into it.

Sixth—It should keep the water aerated, so that it will not become foul or stagnant.

Seventh—It should have sufficient storage and high enough pressure for fire protection.

Eighth—It should be compact, simple and easy to operate.



We are indebted to the Kewanee Water Supply Co. for illustrations used in this article.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 364 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 365 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 366 E. B. RUST, Los Angeles, Cal.
B 367 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 368 WILLARD C. NORTHRUP, Winston-Salem, N. C.
B 369 JOHN HENRY NEWSON, Cleveland, Ohio.
B 370 BUNGALOWCRAFT CO., Los Angeles, Cal.

Design B-364.

THE first design we are presenting to our readers in this issue is a type of English suburban home, constructed in part of brick and stone and a considerable portion of the exterior finished with shingles stained. Cement could be used to good advantage on the exterior, but in this design it was intended to use cement shingles. The walls of the first story around the main living room are carried up in brick with stone trimmings, all other portions of the house being shingled. The house is covered with a low, spreading gambril roof, with two gables in the front, a wide piazza entrance and an open terrace continued in front of the living room and connecting with a covered piazza at the side of same. This house is planned on a liberal scale, with large and ample sized rooms arranged for comfort and convenience. The central vestibule entrance opens into a hall 14 feet wide, with sliding doors opening on each side. The left hand opening into a large living room, 20x24 feet, and sliding doors opening on the right into the dining room.

The main staircase leads out of the rear of the main hall and at the left of the same are wide sliding doors opening into a large, one-story billiard room; 20x26 feet. The living room connects with the billiard room through the den. At the right hand side and front of dining room is a conservatory, with glazed windows on three sides, making a beautiful place for plants.

The genearl size of the house, exclusive of projections, is 36 by 64 feet, standing with the broad side to the front. In the second floor are two large chambers and two small chambers, a dressing room, ample closets and two bath rooms. The attic is divided into a large amusement room and servant rooms. The entire house is finished in a strictly modern way with hardwoods on the first floor and soft wood finish on the second floors. The principal rooms on the first floor have beamed ceilings. The ceiling heights are low, the first story being 9 feet and the second 8 feet. It is estimated that this house can be built complete, exclusive of heating and plumbing, for $10,000, the cost can be very materially increased or diminished, according to the finish used and the materials that are used for the construction.

Design B-365.

In this design we are fortunate in being able to show the house from a splendid photograph. Pictures from real life are always so much more interesting, as they depict the exterior in its actual and absolutely true light. It is a home well adapted for the southern states, having a large, spreading Colonial porch extending not only clear across the front, but around on two sides. Looking at the floor plan, one observes this same generous, free,



Chas. S. Sedgwick, Architect.

DESIGN B 364

An English Suburban Villa

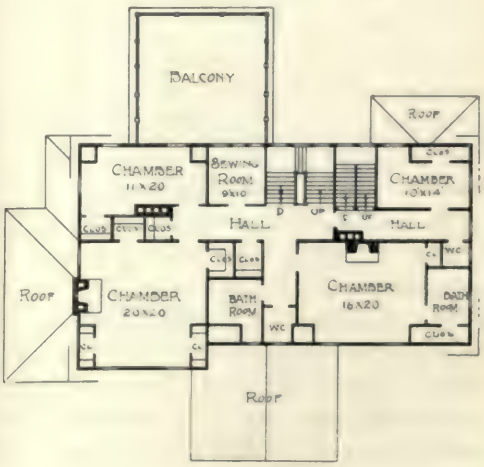
open style carried out on the inside as well.

There are only three rooms on the ground floor, short partitions separating the beautiful living room extending across the end of the house from the central hall. The dining room can be closed off entirely from the rest of the house. Should it be desired to reach the front entrance from kitchen without passing through dining room, a slight modification could be made in the arrangement and passage opened from kitchen into phone alcove.

This home is planned strictly as a country residence or summer home. Excavation for basement is made under only a portion of the house, where a good sized vegetable cellar and laundry is provided.

For the exterior, narrow siding is used,





not only for the walls, but as a casing from the porch rail to the ground. The interior is intended to be finished in yellow pine left in the natural grain, varnished and rubbed to a dull finish.

Design B-366.

The following design is one of a five-room bungalow most modest in its pretentions, with very simple treatment of roof, which is worked into a low pitched gable in front as protection for the porch.

The outside is covered with shakes and the home illustrated from photograph as actually built, is strictly that of a little western cottage. It is built right on the ground without basement, the house resting on a low brick foundation.

Using the western soft woods for the interior trim and finish, including the flooring, this little home is estimated to cost, including fireplace, $1,800.

Design B-367.

Our next design is again in decided contrast for it represents a large Colonial design for a country home. It is planned for a southern climate and was built as such in Georgia. There was no requirement for a full basement which is not provided in the plans, but it could be easily arranged, of course, should this house be erected in a cold climate. There is a cellar under kitchen only.

The most striking feature of the house is the circular porch in front supported by six large fluted colonial columns. The balance of the design is strictly in keeping with the Colonial style of architecture and this will make a very nice home for anyone who favors the Colonial style.

The interior has been handled with liberality as to the sizes of rooms and the manner in which they open into one another. The wide columned opening separating the reception hall from the living room to the left and library opposite, practically give one long sweeping room across the entire front and yet each room is in a measure by itself. There is a double fireplace serving the library and dining room, with a fireplace in one of the upper chambers making three in all.

Hardwood flooring is used on the first floor, with Georgia pine above and Georgia pine is used as the interior finish, thereby materially reducing the expense which would be involved were the house finished in some of the hardwoods. The architect advises his estimate built as described, to be approximately $10,000, complete, including plumbing, but emphasizes the fact that the house so built is not intended for a cold climate where a full basement and heating plant would be necessary, as well as additional provision for warm construction in the walls.

Design B-368.

Architect Willard C. Northrup, a former contributor to this section of the magazine, has furnished this month a design for a splendid stone city residence. The stone work is laid broken range ashler. The roof is covered with asbestos shingles, a very durable product and now obtainable in several pleasing colors. Unfortunately the drawing of floor plan furnished by the architect, merely designates what the different rooms are without their dimensions and did not mention the sum which this house cost. We can, therefore, merely say that from its general appearance, that we presume such a house containing 12 good sized rooms, including two bath rooms and toilet additional, would cost around $18,000 to $20,000, completely equipped. A study of the floor plans will show that the arrangement of rooms is exceedingly good and there are six bed rooms on the second floor with opportunity of utilizing the third story for at least three additional rooms.

Design B-369.

The next design is a cottage rendered by architect Newson, a modest home of



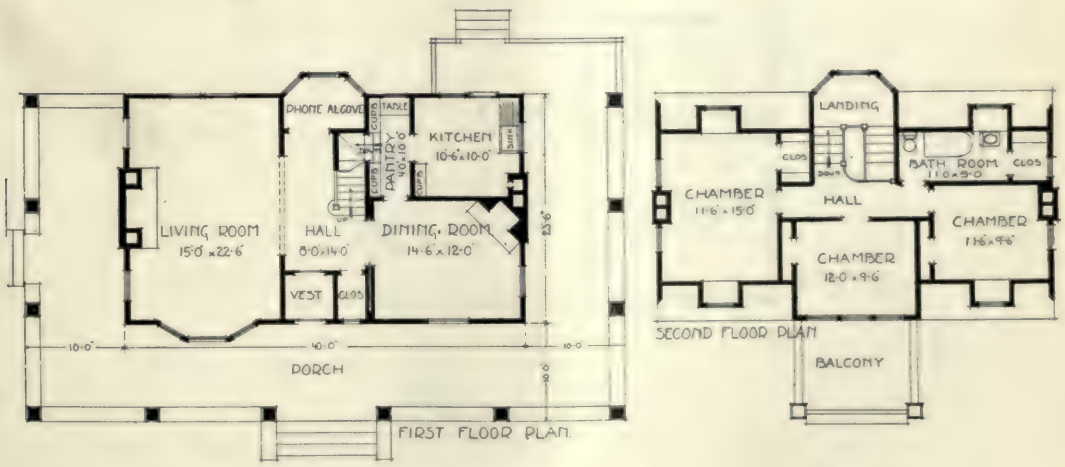
DESIGN B 365

With a Large Colonial Porch

six rooms treated in an artistic manner and with provision for the much called for sleeping porch of today. The entrance from vestibule is into a little square reception hall which opens directly into both living and dining rooms. These rooms are separated by a simple cased opening. The sizes of all rooms are most modest. The living room is the keynote to this design in the interior arrangement and has a splendid brick fireplace at the front end, the chimney being built outside and thus giving more space in the interior, every foot of which must be conserved to practical use.

Design B-370.

We have not had a design from the firm specializing the Bungalow craft architecture for some time, but are pleased to present this month one of their attractive homes built in Sunny California. It is of pretty fair dimensions and provides for three good sized bed rooms. There is a stairway going to the attic up from the rear hall, where will be found good storage room. No basement is intended and therefore no heating plant included in the approximate cost estimate of $2,300.

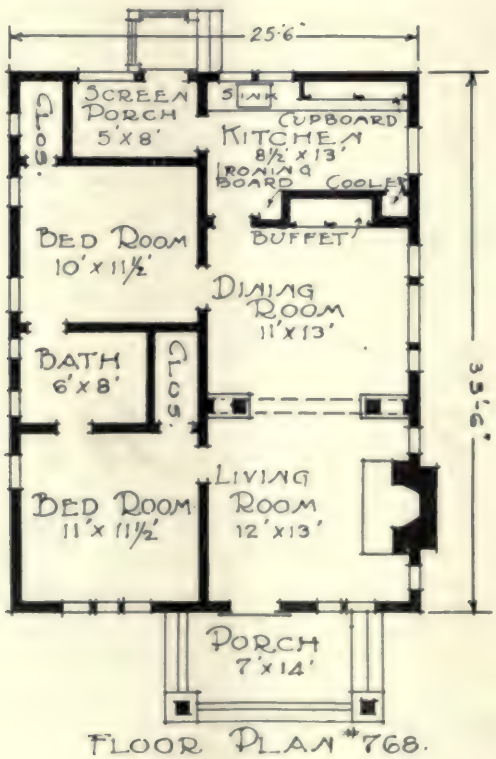




E. B. Rust, Architect.

DESIGN B 366

A Five-Room Western Bungalow



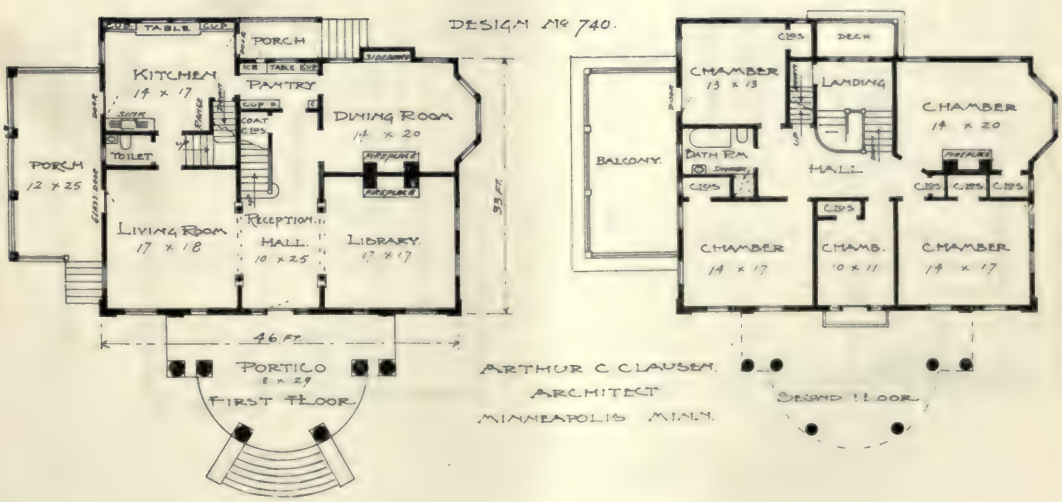
FLOOR PLAN #768.



Arthur C. Clausen, Architect.

DESIGN B 367

A Southern Colonial Home





Willard C. Northrup, Architect.

DESIGN B 368

Good Type of a City Stone Residence

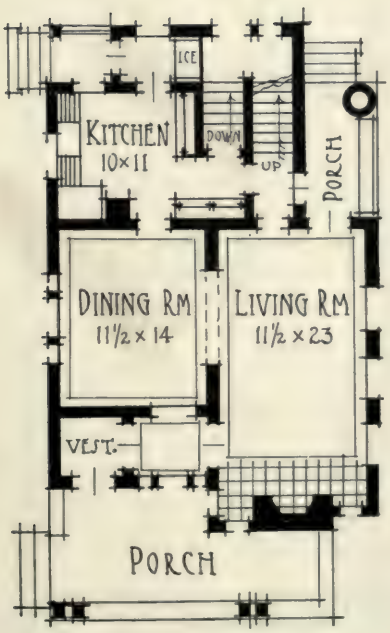


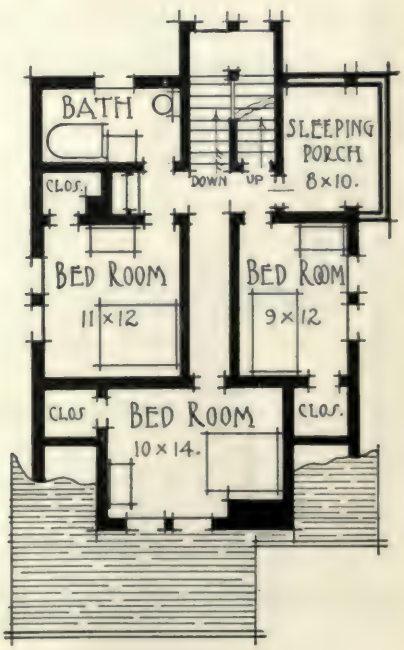


John Henry Newson, Architect.

DESIGN B 369

Sleeping Porch Is a Feature of This Cottage



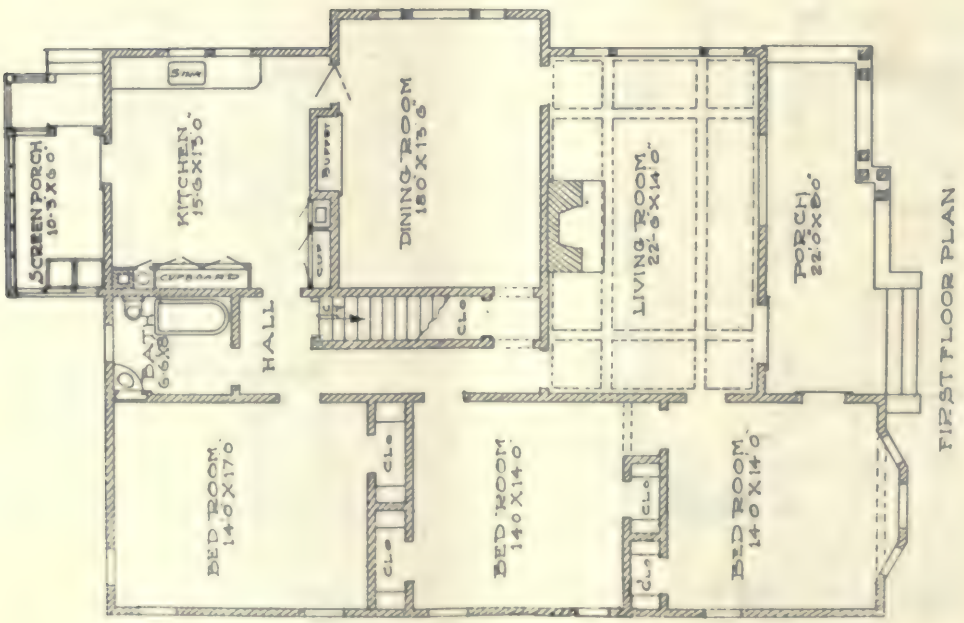


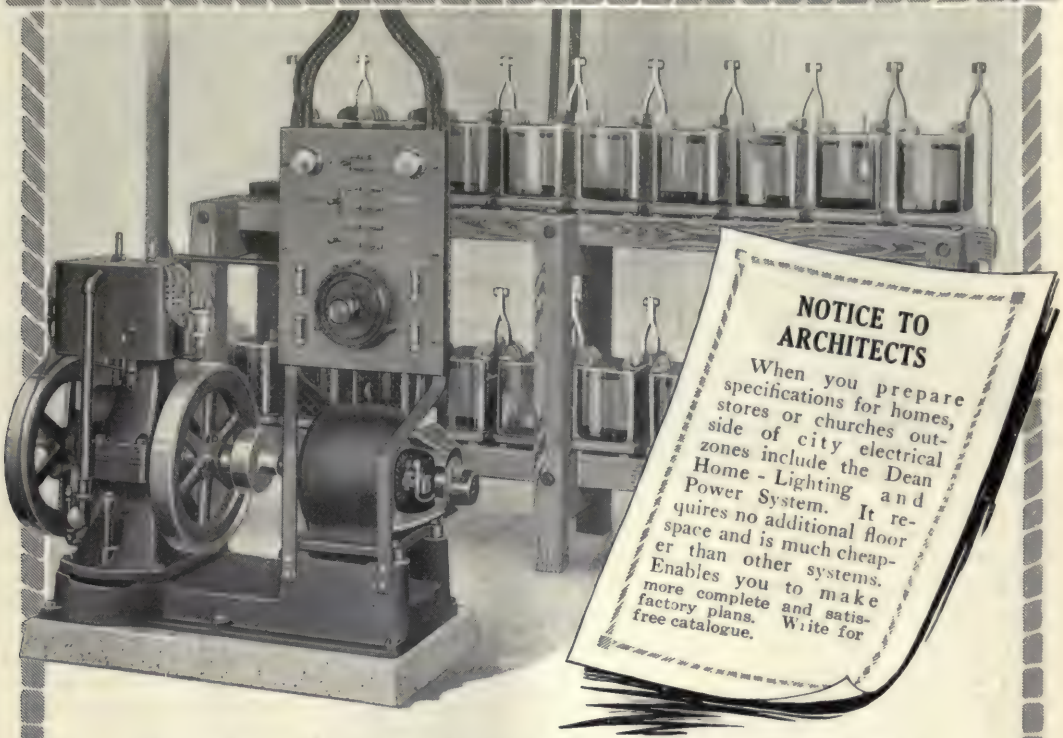


Bungalowcraft Co., Architects.

DESIGN B 370

A California Bungalow





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Conducted by ELEANOR ALLISON CUMMINS, Decorator, Brooklyn, N. Y.

Enameled Furniture.

THERE seems to be no end to the vogue of enameled furniture, a vogue somewhat difficult to understand, as it has so much less permanent value than natural wood at the same cost. Moreover, there is a certain daintiness about the enameled furniture which makes it rather unsuitable for the hard usage of every day.

But given the right surroundings it is very charming, less so in lead white than in the gray or ivory tones. A season or two ago there was a great deal of stone colored enamel in the market, the tone copied exactly from old French furniture, but it really looked well only in combination with rose color, and bright rose at that. This year the gray is a delicate tone, like putty but lighter, and is very charming with flowered cretonnes with gray or pure white grounds. The ivory enamel demands furnishings whose ground is cream colored.

Some of the ivory enamel furniture is painted, in Adam style. Table tops are elaborately decorated with wreaths and garlands of tiny flowers in delicate colors. Here is a suggestion for the amateur artist. The sort of skill which enables one to paint Dresden designs on china ought to be equal to an Adam decoration on white wood, and the product would probably be far better than the things sold in the shops.

An Effective Dressing Table.

Occasionally the searcher for antiques runs across a console, in mahogany, with a semi-circular top, sometimes with an under shelf. A clever decorator has utilized one of them for a toilet table in a room furnished with antiques. The wall at the back is covered with a hanging of point d'esprit over rose colored satine, narrowing as it approaches a point about four feet above the top of the console. At this point is a dome-shaped arrangement, covered with cretonne, with cretonne curtains hanging from each side of it and fastened back at each end of the table. An oval mirror in a gilt frame hangs against the point d'esprit, with candlesticks to match it on the table.

A very common Chippendale piece is one of these semi-circular tables, with two legs in front and a line of satinwood inlay, and the writer has seen the design copied in yellow and black painted wood, in a New England town which she once knew well. If one of the latter sort could be found it would be an easy matter to refinish it in enamel. She has seen a mahogany lowboy used for a dressing table, but not very happily, she thinks. Its best use is as a serving table.

Striped Canvas for Coverings.

A canvas, in inch wide stripes of blue and gray, is used for loose cushions for wicker chairs. It is shown in conjunction with furniture in Yale blue, and offers a suggestion to people who are furnishing college rooms, as it has a less dressed-up air than cretonne, and is, of course, much cheaper than corduroy.

Another economical upholstery material, which looks a great deal better than it sounds, is burlap. The writer has seen, in a country living room, all the upholstered furniture covered plainly with olive green burlap, with pillow covers and curtains of a very decorative blue and green cretonne, and the effect was admirable. The same idea might be carried out with tobacco brown burlap, using for cushions and curtains one of the fruit patterned cretonnes in low tones of orange, red, brown and green.



THE COLOR SPECIFICATIONS FOR THIS HOUSE ARE

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TRIMMING—S-W French Crown Green (light)
SASH—S W P Gloss White
ROOF—S-W Preservative Shingle Stain C-74



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will give you some decidedly valuable suggestions, not only on a complete decorative plan for the outside of your house but also for the general scheme and details of the interior. It will be of help to you no matter whether you are going to stain a chair, change the decorations of a single room or paint or refinish your whole house, inside and out. It is a book of practical artistic suggestion. We shall be glad to send it—free—for the asking.



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Cretonne Covered Clothes Poles.

The latest article to be covered with cretonne is the clothes pole, known to the trade as a customer. One of very simple pattern is selected and the whole thing, pegs and all, is covered plainly with cretonne, pasted on, with only an absolutely necessary use of tiny brads.

A curtain pole covered with cretonne and bracketed behind a door is useful for holding extra blankets and the heavy spread taken off at night.

Recent Designs in Couches.

Most of the upholstered furniture is made in the English designs of the classic makers, showing more or less wood. Chippendale's Chinese chairs and sofas, with low stuffed back and interlaced ornament are exactly reproduced, and are covered in small patterned haircloth, generally green, or else in panne plush. This material, or tapestry, is generally used for the English styles, the light colored brocades and French tapestries being suitable for the more elaborate furniture of the French periods.

As a concession, presumably to American restlessness, the high backed arm chairs, with projecting, "eared" sides are now supplied with rockers, a set including an arm chair, couch and rocker. As a matter of fact, a set of such weighty pieces is rather overpowering. The chair by itself is far more effective, when its height and depth are contrasted with lighter furniture.

Davenports and Watteau Tapestries.

A special style of davenport has been devised in order to make use of the French tapestries in designs of landscapes and figures, à la Watteau. It has a rather low curving back, framed in mahogany or oak, with pillars at the front, and a heavily tufted seat. This back is plainly covered with the landscape tapestry, while the seat and the whole outside of the sofa are covered with a tapestry in conventional design and exactly harmonizing in tone with the back.

William and Mary Furniture.

The sofa which was in vogue in England in the last decade of the seventeenth century had a high back in either two or three sections, each section sharply curved. Sometimes the backs were of cane paneled wood, sometimes they were plainly upholstered. The turned legs were cross-braced and arm and side chairs were exactly like the sofa. In fact, as is the case with much of the classic English furniture, the sofa was really made up of two or three chairs joined laterally. This is the style of furniture which is known as William and Mary, and it is very dignified in effect. It should be upholstered in leather or low toned tapestries, and is emphatically furniture for the large house.



DAVENPORT DESIGNED TO USE WITH WATTEAU TAPESTRIES.

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William Morris brought them into vogue, and dyed them in wonderful colors at his shop at Hammersmith, and it has always been possible to import them from England, but the fancy for them was a transient one in this country. Now they are sold again, coming in lovely tones of soft color, and are commended to people who want to do effective work without too much expenditure of time or eyesight. Heavy linen is the best ground for this work, which is most profitably done in satin stitch without padding, outlining the forms with silk in black or golden brown. The designs chosen are of course conventional, and are of necessity of fair size and free from petty detail. While it can be done in self tones on a colored ground, a background of deep cream is the best thing to bring out the lovely coloring of the wools.

Dendy Saddler for the Dining Room.

Dendy Saddler has managed to catch the vanishing charm of the early days of the nineteenth century in England, before the awful blight of the Victorian period settled down upon her domestic life. His pictures are charming in black and white, still more charming in their colored reproductions.

A recent importation is intended for the diningroom chimney piece, three of the prints being grouped in one wide mahogany frame. The central print represents a group of men sitting over their wine, the smaller ones at either side a single figure, one of them being the old butler, who figures in so many of Saddler's pictures. It is difficult to imagine a more agreeable bit of color to enliven a sombre room than this. The price is $25.00.

Various Trays.

For the short purse, which may not aspire to an oval mahogany tray, or one of Sheffield plate, there are serviceable affairs shaped like the mahogany ones, with a bottom of light colored wood and a substantial edge and handles of natural wicker. Circular trays, entirely of wicker, but strong enough to bear a considerable weight, are Chinese and cost only fifty cents in a twenty-inch size.

A picture frame which is made of rather heavy molding, so that it stands up from the glass as much as an inch, and is of good proportions, can be utilized for a tray, filling it in with a piece of cretonne stretched over cardboard, backing it with a piece of felt, and supplying it with handles.

There is an oval picture frame of dark wood, about seven inches long, which is sold in New York department stores for about thirty cents, which makes an extremely good small tray, when filled in either with a bit of embroidery or a Japanese stencil. For these small trays the handles are not really necessary, but if one knows anything about metal work it is easy to make tray handles from sheet brass or copper.

In making writing sets of cretonne or brocade the tray is always troublesome, but the difficulty is avoided by getting a narrow picture frame, long enough to hold the inkstand as well as the pens, and filling it in with the material.



"The Furnace of Few Joints" 1

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The body of an ACORN FURNACE is composed of six pieces, fitted together with deep cut joints.

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The illustration shows part of the spacious living room in the summer home of a prominent United States Senator.

This charming home is finished from top to bottom with—

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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

Central Staircase.

F. D. K.—Your book of 100 interior decorations has given me many valuable hints in the house I am about to build. I send a rough sketch of house, and will be most happy to receive a few suggestions on interior decoration. As you see by plan, I am to have a central staircase. Have you any designs of a handsome staircase either central or any other design. Would the woodwork **have** to be white in hall? The house exterior is a small copy of Flagler's at Palm Beach and is Spanish more than anything else. The outside cement, and the roof red tile. I am very anxious to get a picture of a hall and staircase that I saw at the theatre, in a play, "Monsieur Beaucaire." Can you tell me how I can get it? I have forgotten the name of the actor, but he was a nephew of Booth's. I am not anxious to have the hall and stair white as there is a great deal of direct light in the hall and I think dark wood much handsomer. The piazza in front is 15 feet wide and runs the entire length of the house, the vestibule opens on the main hall, with columns between. This hall and staircase I want the feature of the house, can you suggest wood, etc? Would a beamed ceiling be good and what shall I do with the walls? The drawingroom opens into the hall, and also into the palm room. Would it be pretty in pink and gray or what would you suggest? The library is on the other side of the hall. I have some very handsome carved mahogany and leather furniture for it. What wood would you suggest, and would Japanese grass cloth be good on walls? The diningroom is in the rear and I want it in mahogany beamed ceiling and wainscoting on walls and either tapestry or grass cloth above. It opens into the palm room with sliding doors. It has no room over it, so as to give staircase plenty of direct light. Please tell me if you think this plan will make a pretty house. I am very anxious to have shutters like some I saw in Florence, Italy, at the Washington hotel. They were of heavy wooden slates, and slid into the wall on rollers. In the middle of the shutter was a hinge and the shutter could push out and form an awning. I have written to Florence, but can get no satisfaction. Can you tell me if you know of such a shutter or any way in which I could get drawings and specification of same? I am so much obliged as I am most anxious to use them.

Ans.—Regarding the central staircase, we cannot supply you with any picture showing such a stair. We know of but one house in this city with such a stair. Such an open well up through the center of the house is quite impractical in this climate, though it might answer in yours. As to character of woodwork, that would be governed by the style of the house. With a Spanish exterior, if a large handsome house, a stairway of marble or concrete would be most in keeping. The wall above the wainscot could be hung in tapestry. The floor of such a hall should be large square tile; but the remaining woodwork could be oak or mahogany. The staircase you refer to in the play was in a southern home and in white mahogany. Such a type of house would seem more appropriate and more attractive in your locality than the Spanish. Your floor plan arrangement is very attractive indeed, but costly. It seems impossible to make suggestions as to decoration of walls, and until the style and general plan of the house is decided upon.

In regard to the outside shutters, they do not seem in harmony with a Spanish design. However, you have seen them

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and should know. It would be possible, perhaps, through the American consul at Florence to obtain the name and address of the architect of the hotel, you could then write him for a drawing of that detail. You would have to pay for it, of course, and it would take time. You should also find out from the architect the method of fastening into the wall. The fastenings or grooves must be incorporated into the wall as it is built.

W. H. E.—"We are just about to begin decorating our new home and would very much like to have some ideas and color schemes for livingroom, diningroom, reception room and hall. Diningroom is being beamed in oak, hall oak, reception and livingrooms in mahogany. Enjoy my Keith's very much."

Ans.—As no return postage for reply was sent we are answering this inquiry in the columns of the magazine. We regret that so little data was given and no diagram of floor plan, as any suggestions must of necessity be of a general nature.

With no knowledge even of exposures of the rooms, we can only advise our correspondent either to write again and supply the needed information or study carefully the answers to other inquiries and the many suggestions given in this department.

Red Leather Chairs.

Mrs. J. S.—"Inclosed find the plans for my lower floor of house, and I want your advice and suggestions in making and decorating same, as I am of the opinion your taste is excellent and your ideas and suggestions new and up-to-date. I want this place to be quite attractive. In my diningroom I have a very pretty mission set of furniture, and thought I would make the woodwork to match furniture, the seats of chairs are of red leather. What would you suggest for wall papering and draperies? Will have a French glass door between dining- and livingroom. The livingroom, as you see, is very long, have a brick mantel in hall, beamed ceiling in both rooms, with hardwood floors, have the Oriental rugs for both floors. My furniture for livingroom is mission. Would you carry it out in mission, too, or would you white enamel the woodwork and possibly the furniture, too? Do you think it would look too glary to have woodwork and furniture white with the cretonne cushion seats? Have heavy ecru lace curtains for room, but have not decided on wall paper or draperies. If you could suggest anything odd and effective would appreciate it. What style of brick mantel would you have made? Would you add the mission lamps to it in any way?"

Ans.—Your very nice floor sketch omitted one point, viz.: The exposures of the rooms. We have, however, in the red leather diningroom chairs, a feature which must be our starting point, as it is too prominent to be ignored. The woodwork here should nearly match the furniture and we would use a color scheme of red and green if it is west or south facing, making the green most prominent and only enough red to keep the chairs in countenance.

There should be harmony between these two rooms, as the French doors open between. They can be made most attractive, but without definite knowledge of exposures we cannot advise to advantage. We should not, however, combine white woodwork with mission furniture and Oriental rugs. Most certainly not paint the furniture, as its lines are entirely unsuited to a white finish. What you can do if you are desirous of lighter effect, is to paint the woodwork antique ivory, with small cap mouldings stained brown. As this is a large room it will bear a good deal of furniture and we would add to the mission pieces, several chairs and a table or desk in good willow, slightly stained a light brown and upholstered in cretonne.

The brick mantel should be on plain lines and of ecru colored brick. We think your best way is to avail yourself of our 50-cent a room service, which includes samples of all materials advised, with prices and directions for use, at the same time sending further information as to exposures, color of rugs, etc.

Harmonizing Mixed Furnishings.

A. S. F.—"For the past year I have read with much interest your page in Keith's Magazine, and think you will perhaps give me some help as to my furniture, also paper for walls.



·IN THE KITCHEN·

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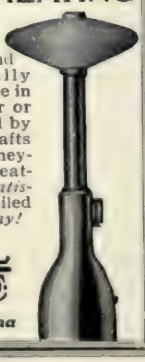
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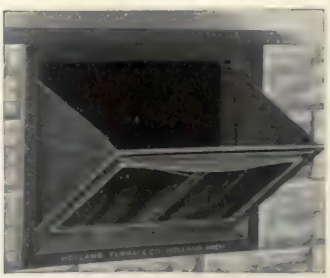
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"Floor covered with straw matting with small green figure on light background. Home-made mats with some touches of red. Walnut furniture. How can I cover trunk and old-fashioned chair and with what material? What kind of paper would be suitable for walls? Woodwork white.

"Matting, Japanese with figure brown and background green and cream. Iron bed enameled green, dresser mahogany. Table enameled white, wicker rocker and chair, rugs greens and browns, sewing machine and trunk have covers of tan cretonne, conventional design. Should table match bed in color and suggest covers for dresser and table, also wall paper? Is wicker rocker best just natural color or enameled to match bed? Woodwork light and dark stone color.

"Bathroom. What is necessary at a bathroom window besides sash curtain when tub is directly under window? If curtain, how long should it be and how arranged? Would green brick pattern on cream ground for walls, go with light and dark stone colored paint? If not what color should the paint be? Hall is dark. Floor is covered with dark oilcloth (hardwood pattern) with runner of Brussels carpet, wood and browns with narrow green border. What should the paper be?"

Ans.—Your furnishings are certainly a difficult proposition to harmonize. Something can be done by the selection of wall paper. In the livingroom facing south a wall paper in self-toned grays, a small figure would be the best choice. Since the rugs have a blue ground and furniture covering to match, the box couch should be recovered with some blue material other than denim and bookcase curtains be changed to a lighter but dull blue, then pushed back. Yes, the room seems rather crowded. Either the sofa or the box couch should be removed.

Room 2 could be much improved by using a cretonne having much green foliage and some soft red flowers on a white ground, but the pattern almost entirely covering the ground. Upholster the old-fashioned chair with this and make a cover for the trunk, also put some of it at window for side curtains. Use white spread over walnut bed. Wall paper light gray ground with chintz figure in green and old red.

Room 3. Do over the iron bed and wicker chair a pretty brown. Leave the table white, but have a cretonne mat nearly covering the top. Wall paper small mixed patterns in light greens and tans.

Room 4. Paint over diningroom woodwork deep cream. Wall paper golden brown grass cloth. Curtain ecru scrim.

Room 5. The bathroom window should have a roller shade. Repaint the woodwork white, and use white tile paper on walls. Hard woodwork should be white and very light paper on walls. All the ceilings will be best white.

Corner Fireplaces and Rugs.

R. R.—"I enclose pencil sketch of livingroom and diningroom (city house, inside lot) showing location of corner fireplaces. These fireplaces will also be on the second floor in two bedrooms.

"I would like very much to have your idea of the best way to place rugs on the hardwood floors of these four rooms so as to look right at the fireplaces.

"It is intended to use all four of the fireplaces for heating the rooms with coal or natural gas.

"We would like to use large sized rugs in the center of each room, but it throws a corner of the rugs pointing towards the fire, as shown at A, dotted lines.

"This seems objectionable. Can you suggest any other or better arrangement of rugs or floor covering for these four rooms? If so I would be very glad to have you reply by mail (postage enclosed).

"Also please indicate on sketch proper location for combination electric and gas light fixtures in the living- and diningrooms. The main pieces of furniture for the livingroom will be piano, center table and medium sized sectional bookcase, all mahogany finish. Would you use ma-



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hogany or weathered oak finish on base, door and window trim?"

Ans.—There is no other way to lay the large rugs except as you have drawn them. That is one drawback to a corner fireplace. It is the last resort of a good architect. We agree with you in your dislike of small rugs and would much rather use the large one even at the disadvantage of turning under the fireplace corner. It is usually cut off by house furnishers under similar conditions. The objection to this is that the position of the rug cannot be changed.

We would never install combination light fixtures. It is impossible to get good designs in combination fixtures. In a room the size of your livingroom, a center ceiling light seems desirable for occasional use when the room needs to be brilliantly lighted. The best designs now show circular disks of brushed brass set close to the ceiling with a shower of four or five lights depending from short chains. In the diningroom, either two lights hanging from such a plate or a dome over the table. Aside from these, side brackets are indicated in blue pencil. In livingroom, one near where piano is supposed to stand, another for a fireside chair for reading. There should also be an attachment for a table reading lamp.

Inasmuch as the furniture is mahogany, we should advise a mahogany stain on woodwork.

Restful Color Schemes.

W. H. F.—"I enjoy your magazine very much and have great confidence in your decisions on interior decorations; therefore I am sending to you a rough sketch of our floor plans, and would be glad to get your advice as to paper, color scheme, etc. Our climate and soil are against the use of plaster and calsomine interiors so all reference to walls will have to be considered in paper and wood. I desire no color used that has any effect on the nerves save to quiet, if there is any truth in the theory that we are affected by such surroundings. Referring to the sketch, you will see that I have indicated the colors I should like to use, but am open to suggestions and will be so glad to have your help."

Ans.—In regard to your own suggestions, yellow would certainly be very trying to the nerves in a southwest livingroom in your climate. There is, however, no reason why you should not use warm golden browns and yellows in the diningroom with the fumed woodwork. We should advise the low-toned greyish green for the livingroom with fireplace brick of mottled green and ceiling on the tone of the walls, but several shades lighter. We would do the parlor in a tapestry design in rather light self-toned greys and the hall in a stronger, grey grass cloth. As to floors, oak, of course, would be much best, but if pine is used, they should be treated the same as oak.

The same objection holds in your color plan for the second floor. Yellow would certainly be garich in that south chamber. We should do that room in cool light greys; you could, however, introduce a touch of yellow together with dull green and rose, in a band decoration on the grey wall, carrying the same into rug and furnishings. The little daughter's room opening from it should be done in grey and rose, the rose strongly predominant, as for instance, the rug in all deep pink tones. Dull blues are very restful to the nerves and unless your husband is prejudiced against blue at all, we should suggest them rather than grey for his room. There are excellent effects in these dull blues for a man's room, as for instance, a very small all-over tapestry design in two tones of dull blue for the wall, which a few feet away gives the effect of a plain wall. The old ivory ceiling could have a narrow decoration in dull blue running round it. The fireplace tile of dull blue or grey brick. The woodwork old ivory. This would make a more cheerful room than the grey, yet very soft and soothing. It would be a beautiful background for mahogany furniture, the oak could be used also.

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The Value of Silence.

THIS is an age of self-expression. In its wider sense this self-expression is the assertion of the rights of the individual. We no longer belong to classes; we are individuals, each wholly unlike any other, each demanding the fullest possible expression of this individuality. The best sort of expression is the development and cultivation of a special talent or bent. It is one of the admirable things about the present that the number of square pegs in round holes is steadily decreasing. That is not to say, there are not individual tragedies, but there is a steady gain in the number of people, especially women, who have found the work for which they are fitted, and are pursuing it successfully.

But there is another sort of self expression, which is less laudable, and it is commoner among women than with men. Too many of us have a fashion of uttering every trivial thought which enters the mind, without considering whether it is of the slightest value or interest. With a young girl, the ingenious charm of youth lends a certain piquancy to this sort of self revelation. With an older woman it is simply silly, and it is the first step toward the garrulity of old age.

But these pages are not concerned with generalizations but with practical applications. Let us consider, for a moment, the effect upon the household economy of indiscriminate speech. We may imagine a woman of an optimistic turn of mind, one who sees the best side of everything, even of minor calamities, with a keen sense of humor, quick to praise and slow to criticise. With such an one at the head of a household, the evil of too fluent speech is minimized, but, alas, such women are oftenest found in the pages of the novel of manners, if indeed they were not the product of a simpler age than ours.

Does one carefully analyze the prevalent habit of mind of the average woman, it will be found to be one of discontent, more or less definite, and not a divine discontent, either. There is a discontent which is a salutary spiritual experience, but it is discontent with what one is and not with one's surroundings. Now it is bad enough to be discontented with one's condition in life, general or particular, it is worse to be constantly giving vocal expression to such an unpleasant state of mind. And persevered in and made a habit, this expression ultimately demoralizes the whole family, for every member takes his tone from the mistress.

Just here is where the value of a habit of restraining speech comes in. It is hardly possible, in the difficult conditions, in the horrible strenuousness of this particular period, to maintain an absolutely contented mind. To do that one must be more or less of a vegetable, endowed with an abnormally placid temperament. But it is possible to learn not to voice one's discontent. It may be a matter of weeks and of months before one notes a sensible improvement, but it is bound to come, and to bring with it a very definite happiness, not only in the acquirement of a virtue, but in the changed attitude of other people. For nothing is more trying than an atmosphere of suspicion and resentment, and such an attitude is the unfailing response to continual complaint and adverse comment.

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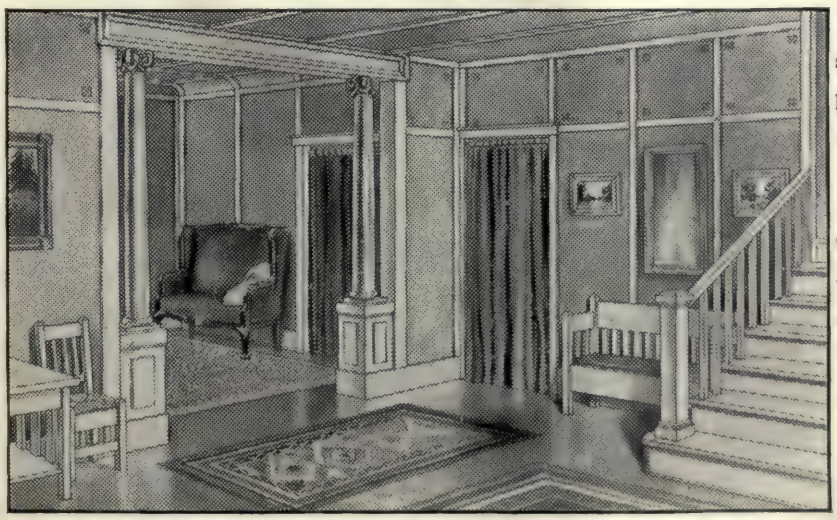


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ances. There is a substratum of natural affection, and they say philosophically that "It is mother's way." Not so with the stranger at the gate. She takes things at their face value, and she gives just what she gets. If you think over your list of friends, you will find that those who have least trouble with the ever-present servant problem are those who are most careful in speech, who are generous with praise and reluctant to blame.

There are other considerations. Self-expression of this sort is a form of egotism, and egotism is always ill-bred. Sooner or later, the ill-bred person degenerates into the bore, and finds herself shunned. Moreover the reflex action of a discontented mind is almost always the production of a very real unhappiness, in its possessor. Optimism is good for the temper and the face alike. It is the open sesame to popularity and the best cosmetic known, while pessimism consistently pursued lands one in a moral ditch.

The Reverse of the Medal.

Still there is something to be said for speech. It is not wise to bring on a nervous crisis by too rigid self repression, nor is it the valiant part to be silent in the presence of evil which calls for reprobation. But acquiring the habit of silence about trifles makes necessary speech so much the more potent. It is not the nagging mistress or mother who best knows how to say the word in season to child or maid. Many things are best ignored, but there is a time when reproof is a duty which may not be shirked, and it comes with the best grace from the one with whom chiding is a rare thing.

Anticipating the Spring Cleaning.

In the early days of spring, although with most of us March is a winter month, it is a substantial help, in the cleaning which comes later, to begin on the closets, and to go over the contents of the bureaus. A definite knowledge of the extent and value of one's treasures is a great help in the spring sewing. One may discover in the bottom of the third trunk from the end in the attic just the piece of lace which will save buying a yoke for one frock, or may be dyed for a guimpe for another.

It requires courage to throw away anything which has been treasured for a long time, but it must be acquired, in the interests of those who come after us, if not of ourselves. Not until one acts as executor of an estate, or knows some one else who does, does one realize what an awful burden the habit of accumulation imposes upon the survivors. Better pass things on while they will be some good. There is a woman in an eastern state, who semi-annually airs all the clothing of a step-daughter who has been dead nearly forty years. Each year the woolens are a little more threadbare, the furs a little more eaten, the muslins and millinery a little more faded, but still the pious task goes on, and the doer is not alone. She is one of a great company of acquisitive and timid souls.

There ought to be in every town a bureau for the sale of second-hand clothing, into which the leavings of well-to-do houses could go, and so be passed on to poorer people who, where such bureaus exist, are only too glad to buy left-off clothing and other household impediments. Your white elephant may seem very desirable indeed to some one lower down in the social scale. And could you visit one of these bureaus, which are part of the social betterment schemes in many cities, you would be astonished at the things which the thrifty poor value sufficiently to buy for a trifle. Odds and ends of trimmings, bundles of pieces for patchwork or carpet rags, soiled hair ribbons and neckties, all these are eagerly sought. But to send absolute rubbish, torn lace, tattered finery and broken china to these places is to do more harm than good.

Oriental Art in American Rugs is the title of a very beautiful and superbly gotten up booklet issued by the Whittal rug people, Worcester, Mass. Although the white kid cover shows a bit of the desert and rug laden camels crossing it, in illuminated colors, the rugs illustrated and described are fabrics produced at the famous Whittal Mills, American reproductions of all that is best in Oriental art and weaving, in artistic coloring and design. The illustrations bring out in full the exquisite detail of the design, each being comprehensively described on the opposite page.



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The Summer Salads

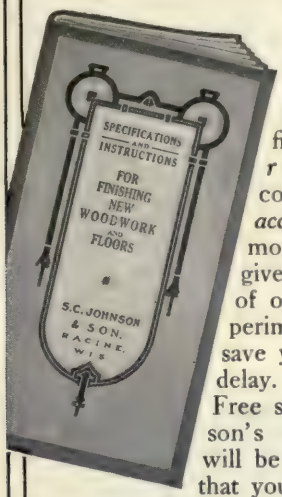
SALADS are particularly grateful at this season of the year, though there are many people who never feel that dinner at any season is complete without the salad. When simply dressed nothing is more healthful than a salad, and it is only the fruit salads with very rich dressings that can be held responsible for a mistaken prejudice conceived by some as to their digestive harmfulness.



SALAD IN BEET TULIP CUPS AND RUSSIAN SANDWICHES.

Any ingredient for salad in the way of lettuce, endive, chicory, escarole or the like should be well washed, then drained by being shaken in a wire basket or hung up in a cheesecloth bag. A grain of sand or an overlooked insect will spoil the best made salad for the fastidious, and the moisture from carelessly drained leaves will ruin the flavor of the finest dressing. None of the leaf salads should be cut, but pulled apart or broken in pieces with the fingers. If oil is used it must be the best, otherwise substitute melted butter or cream, and in fact when one is uncertain of the tastes of one's guests it is advis-

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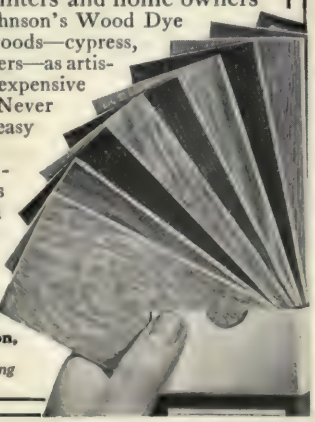
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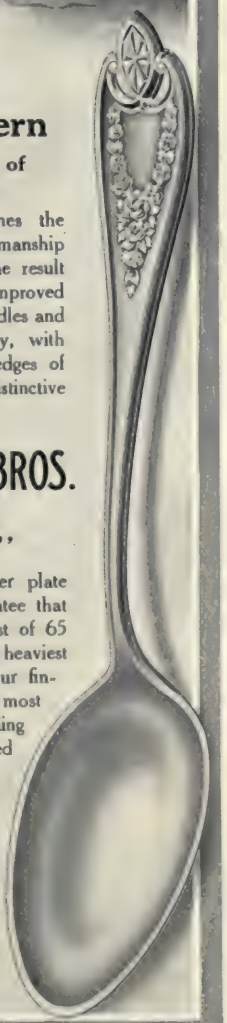
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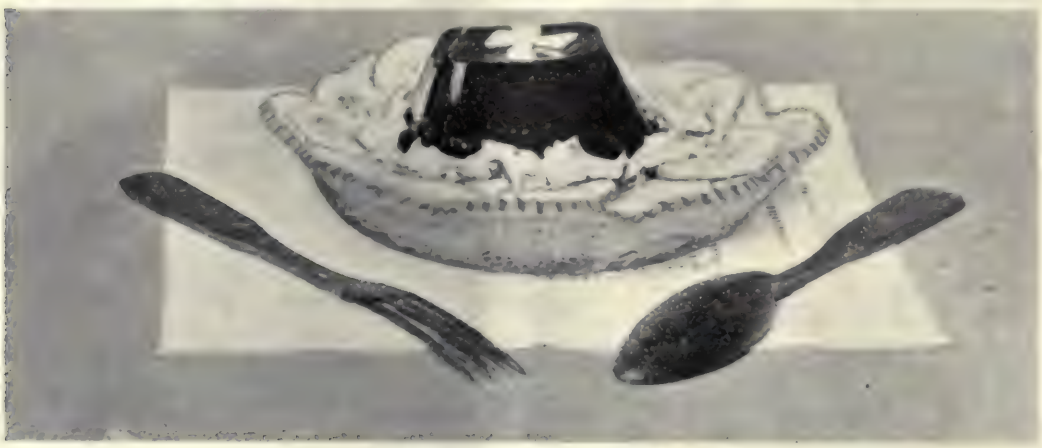
able to omit the oil, as many persons dislike it, no matter how excellent the quality.

* * *

The three popular dressings are Mayonnaise, French and Boiled. With any of these for foundations an endless variety can be made by adding flavoring and other ingredients. An excellent recipe for a stiff mayonnaise is as follows: Beat the yolk of a raw egg just sufficiently to break it, then add a saltspoonful of salt and a pinch of paprika or cayenne, and, very gradually, beating all the time, a dressing if the flavor is liked. Chopped olives, red peppers, capers, onion, pickled gherkins or parsley may be added to either of these dressings for a variation of flavor.

* * *

French dressing is made by beating together three tablespoonfuls of oil with two of vinegar, using salt and pepper to taste, also a pinch of sugar, if liked. This can be used with orange or other fruit salad, as well as potato, string beans, asparagus or other vegetables served cold as salad.



CUCUMBERS AND TOMATO JELLY.

tablespoonful each of lemon juice and cider vinegar. Now add, a teaspoonful at a time, a half pint of olive oil, and scatter in a saltspoonful of dry mustard. An egg-beater may be used for beating, but if a fork is employed remember to keep the motion all one way or the dressing will curdle. When very thick put in a dish on the ice until wanted. Even if more vinegar is preferred let this be added by the guests at table, otherwise the mayonnaise will not retain its stiffness.

* * *

For a cream dressing, uncooked, mix two tablespoonfuls of lemon juice, one tablespoonful of vinegar, a teaspoonful of salt and a half a teaspoonful each of sugar, dry mustard and paprika or a dash of cayenne, then just before serving beat in quickly a cupful of stiffly-whipped cream. Three tablespoonfuls of grated horseradish will greatly improve this

Boiled salad dressing can be prepared and kept on hand for a month in cold weather and from a week to ten days during the summer. For it are required a tablespoonful each of salt and dry mustard, four tablespoonfuls of granulated sugar, two tablespoonfuls of flour, five tablespoonfuls of butter, measured after it has been melted; the yolks of four eggs, one and one-half cupfuls of rich milk and two-thirds of a cupful of vinegar. Cook in a double boiler until very thick, stirring all the time until it begins to boil, then remove from the fire and set the saucepan in a pan of cold water and beat thoroughly. A quarter of the recipe may be made, but as this dressing is generally liked it saves time to make the large quantity when salad forms part of at least one of the daily meals.

Orange and endive salad is an attractive-looking and delicious-tasting dish.

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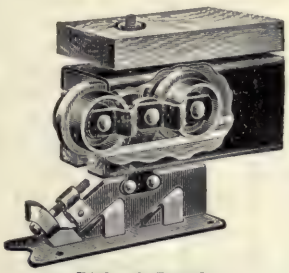
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The endive stalks should be separated and well washed, then placed to form a border in a glass salad bowl, the orange being piled in the center after it has been peeled, divided into sections and the white membrane removed. If the seedless navel oranges are not obtainable the seeds must also be removed from the sections. Sprinkle over at serving time a dressing made by beating together three-quarters of a cupful of orange juice, a quarter of a cupful of lemon juice, a tablespoonful of olive oil or melted butter, a tablespoonful of sugar and a generous shake of cayenne. All should be served very cold.

* * *

Tomato jelly and cucumber salad is much appreciated by those who cannot eat sliced raw tomatoes, because of the seeds. To prepare the jelly cook sufficient raw tomatoes in as little water as possible to make a cupful, or canned tomatoes may be used. Season while cooking with two or three cloves, a bay leaf, salt and pepper. Cook for ten minutes, then add a tablespoonful of gelatine which has been dissolved in half a cupful of cold water, and strain into a bowl or mould which has been wet with ice water. Let stand for several hours, over night is better still, then turn out in a salad bowl and surround with thinly-sliced cucumbers, making a ring of stiff mayonnaise close around the jelly. Decorate the top of the latter with little points of cucumber.

Cucumber and celery salad in tulip cups made of cold boiled beets makes a pretty supper dish. The largest-sized beets should be used and boiled until tender, then skinned and allowed to cool. The top of each is cut off and the center scooped out with a teaspoon, then the rim cut in notches to look like tulip petals. The beets are then put to soak in vinegar while the stuffing is being prepared. This is made of equal amounts of cucumbers cut in cubes and celery shredded in straws. The beet cups are drained from the vinegar and placed on the serving dish, then filled with the cucumber and celery, and crowned with stiff mayonnaise. The heart leaves of lettuce and semi-circles of beets are arranged to form a border.

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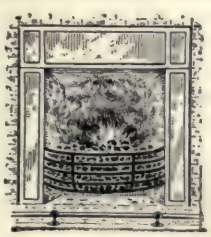
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EXPERIMENTS which show the value of white Portland cement as a hard finish for interior plaster have been made under the personal supervision of E. J. Alferrice, foreman for the Interborough Rapid Transit Co., New York City. Using Medusa white Portland cement Mr. Alferrice made a plaster slab, the mixture consisting of 1 part cement and 2 parts clean sand (if clear white is desired marble dust should be used). This plaster was applied ¾-inch thick as a base, and the surface was left rough enough to insure good bond for finish coat, which was made of 1 part cement and 1 part fine marble dust and 10 per cent (of the entire mix) of hydrated lime. This was applied in a thin coat and finished with a steel trowel. This left a smooth, hard surface equal to the best interior plaster, at an approximate cost for the material for the finish coat, of 12 cents per square yard for every eighth of an inch in thickness. Mr. Alferrice has been able to produce very beautiful marble effects using white Portland cement. The color effect is produced by dipping silk threads into the color desired and passing them over the face of the slab after the final troweling. It is said that to insure clear lines no attempt should be made to use the trowel after the color has been applied. Samples of plaster slab have been laid up on the walls, roof and store room of the Interborough Rapid Transit Co., New York City. Mr. Alferrice used white cement all the way through this slab. This seems hardly necessary. The same result may be obtained by using gray cement with 2 parts of clean sand for scratch coat and a second coat of ¼-inch thick of 1 part white cement and 2 parts marble dust, the finish coat applied as on the slab described.

These experiments seem to open up a new field of use for white Portland cement as an interior finish material for the walls of churches, hospitals, school buildings, hotels and so on, as well as for kitchens, laundries, bathrooms, swimming pools and other places where a waterproof white wall is desired.—Concrete.

An over-coat of cement plaster frequently makes an old frame building not only more attractive in appearance but adds as well to its value in resisting fire and in keeping out the cold. Such a covering is of particular value in the prairie country in withstanding high winds and severe weather. It is an inexpensive method of making almost a new building out of an old one. The cost of doing such work varies considerably with the location. It has been done as low as 69c a yard in small towns where labor is cheap and where the working day is long, and it sometimes is as high as $1.15 a yard in larger places where the workingmen are better paid. The price in Minneapolis, for instance, is $1.00 per yard; 85c per yard is considered a good average price.

Ventilation.

The question of proper ventilation is an important one in concrete residences. In other construction there is a considerable air leakage through the walls and floors. Concrete, however, is wind-proof, which is of advantage, but ventilation must be provided in these buildings, if they are to prove healthful. For inexpensive homes of concrete specially adapted design for ventilation is essential.

"I am called upon to repair a concrete floor on a porch. The floor is perfectly level around the walls but at various places in the center there are holes from one to three inches deep. The owner wants a new coating all over the floor without taking out the old floor. How



Residence of J. W. Rinehart, Youngstown, Ohio. Roofed with Asbestos "Century" Shingles by Dalzell Bros. Roofing Contractors, on the specification of W. R. Leeworthy, Architect and Builder—both of Youngstown. Reproduced from an Artist's Drawing

The *French* or *diagonal* method is used in laying the roof illustrated above, with very pleasing results. For residences, churches and similar buildings this is a favorite way of applying

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am I to go about it to repair this floor and put on a new top coat?"

The best practice says that when a top finish is to be put on a concrete floor, the base of which is already hard, the finish should be at least one inch thick.

The first thing to do will be to clean the existing floor thoroughly. You should go over the floor with muriatic acid and water in a solution sufficiently strong to eat off all the foreign material and etch well into the old concrete. The soft or grainy places in the floor should be carefully chipped away. The acid should be washed off thoroughly with clean water as soon as it has done its work. The floor should be well wetted before the new floor is put on.

This should be a mixture of 1:2 cement and sand, which is well graded, with clean, hard grains, and it should be well pressed into the present floor, but, at the same time, you should not do any more troweling than is absolutely necessary to get a good finish, because troweling will bring the finest particles to the top and will not make a good wearing surface.—Concrete.

Concrete Radiators and Moist Air.

A recent German invention is a concrete radiator for steam or hot water heat which was exhibited in different shapes and constructions last year at the Hygienic Exhibition in Dresden. It improves the sanitary condition of our living rooms by supplying together with the heat the moisture needed for the system of every human being who stays for lengths of time in a heated room.

The radiators are manufactured by pouring a mixture of cement and sand into special gypsum moulds, or iron castings. They can be made in all colors and shapes. The thickness of the walls is about ⅜ in. The specific gravity of the concrete material is low and in consequence 10 square feet of radiator space weighs only 20 kg., which is hardly more than half of the weight of iron radiators.

The advantages in a sanitary view is to prevent the formation of dry air in a heated room. The cencrete radiators are porous, allowing moisture to go through. They heat more quickly and cool off more slowly than the iron radiator. They do not rust and can therefore be connected to hot water heating. Notwithstanding these advantages the concrete radiator costs very much less than the iron radiator.

The tests made with this radiator in different testing laboratories proved the superiority of them over the iron radiators. Refrigerators and radiators, the extremes of household equipment, can both use concrete to good advantage.—Cement Age.

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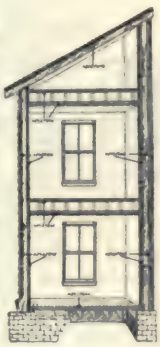


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NEPONSET PROSLATE ROOFING is made in two colors, dark rich red or green, plain or with a hexagonal pattern. Just the thing for bungalows or cottages. Outlasts shingles—easy to apply—no nails exposed.

We shall be glad to tell you more about it if you care to know.

BIRD NEPONSET PRODUCTS

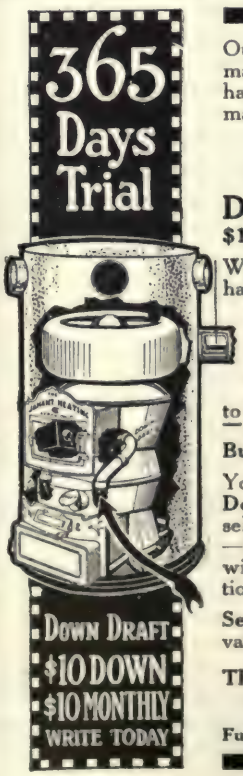
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Canadian Plant: **Hamilton, Ontario**



Our monthly payment plan makes it easy for anyone to have the best heating system made. We sell the

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Down-Draft Furnace

$10 down and $10 a month

We guarantee: Saving of one-half on your fuel bills; plenty of heat and thorough satisfaction. We make the guarantee legally binding, and give you 365 days in which to verify our statements.

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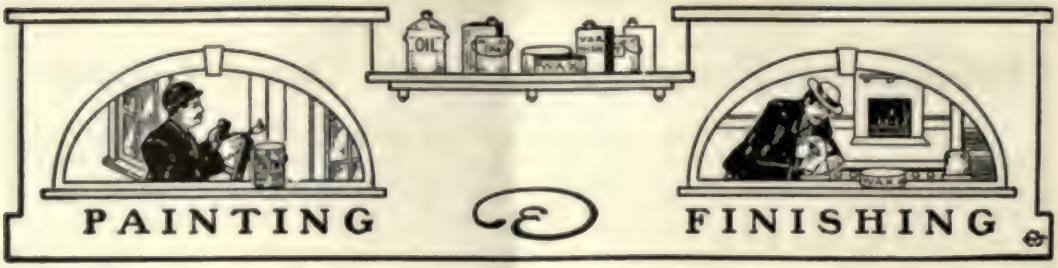
You can install the **Jahant Down-Draft Furnace** yourself. We send complete outfit—furnace, pipes, registers, etc. with special plans, full directions and the necessary tools.

Send for Free Book giving valuable furnace information.

The Jahant Heating Co.

30 Mill St., Akron, O.

Furnace Builders for over 30 years



Uses of Varnish Removers.

THERE is an idea in some quarters that remover is useful only for the destroying of old paint and varnish. It has, however, many household and other uses which stimulate the demand upon dealers.

It is unexcelled in the care and cleaning of old brushes. A brush properly broken in is much more satisfactory than a new one, but when it becomes clogged and stiff, a good soaking in neutral paint and varnish remover will restore it to its original usefulness.

It is a great cleaner for porcelain bath tubs, tile floors, or other similar surfaces. A half pint of neutral remover in a pail of water will greatly simplify work of this kind. For quickly removing enamel or painted letters or decorations from windows it is unexcelled. Putty around windows is also easily softened when the glass is to be removed.

Printers and lithographers have found it invaluable in cleaning type, presses and lithographic stones. Spots from clothing, hats, gloves, carpets, etc., also quickly disappear with its use.

Cuts the Cost in Half.

A foreman painter for the Pennsylvania Railroad Company at a convention of master car painters said: "The cost of removing paint and varnish with remover is about one-half of what it is to remove with scrapers, as near as we can arrive at it."

He further stated that the average cost of removing paint and varnish from a passenger car by the old method of burning and scraping was $88.60, and that the same work is done with remover for $42.70, a saving of more than one-half.

In addition to the money saving feature the finished work is far more satisfactory.

The ingredients in the neutral remover give it the greatest penetrating and cutting qualities. It contains no lye or carbon bisulphide, is absolutely harmless to wood, hands, or fabric, and does not affect coats of refinish in any way.

Made in Two Forms.

For some time this neutral remover has been made in two forms. The regular liquid, and the heavy liquid that stays soft twenty-four hours.

The now almost universal use of paint and varnish removers, in place of the old-fashioned, dangerous and laborious methods, has developed a greater demand for the special heavy or thick article.

This combines all the excellent qualities of the regular liquid form, but being made heavier, it is ideal for use on upright or overhead surfaces, panel work, etc., as it will not run. It will remain soft, or can be removed within twenty-four hours or more after it is applied.

Painters can "double up" with this heavy remover. They can flow it on, and let it work while they are doing something else. Put in on in the afternoon, and take it off the next morning if desired. It can be flowed on just like a varnish; it will not spread, and a hair line can be traced if necessary.

The practical efficiency of the standard brands of neutral removers is acknowledged throughout the trade. At the same time it should be remembered that their use involves no possible danger to the grain of the wood, to the subsequent coats of paint or varnish, or to the life and health of the workmen—which these laws now make a more important consideration than ever before.—Paint and Oil Dealer.

Keeping a Waxed Floor in Good Condition.

Go over the floor once a week with a mixture of equal parts of turpentine, sweet oil and vinegar, using a soft cloth. Polish after this with a clean soft cloth,



Give Your Painter Pure Linseed Oil

As well as Pure White Lead

THAT old saying, "You can't judge paint in the pail," is perfectly true when there is no sure way of knowing what the paint was made of

It isn't true, though, when you talk about "Dutch Boy Painter" *made-to-order* paint, because you know precisely what that contains. That's the kind the painter prepares from



Both are pure. The linseed oil is supplied to the house owner in our one and five-gallon cans, sealed at the spout, and guaranteed by the "Dutch Boy Painter" trade-mark to be just as it was pressed from the flaxseed. The painter mixes the lead and oil in proportions to suit the conditions of each job as he finds it. Besides knowing what it *is*, he knows what it will *do*.

Paint of that kind put on early this Fall will dry hard before the rough weather comes and protect your property from its ravages. Another thing that kind of paint will do is beautify the interior of your home and make it more attractive for the shut-in life during the cold weather.

Ask for Our Painting Helps No. 615

which will give you some convincing facts and information. These helps include our stencil book with a hundred choice designs for high-class decoration, from which you may order at half the art-store prices.

NATIONAL LEAD COMPANY

New York, Boston, Buffalo, Chicago, (John T. Lewis & Bros. Co., Philadelphia)
Cincinnati, Cleveland, San Francisco, St. Louis, (National Lead & Oil Co., Pittsburgh)



HOME BUILDERS—SOME HELP

Beautiful homes—characteristic homes are not accidents, but the outgrowth of careful planning. The biggest help in the preliminary steps is obtained from a good architect's book of designs and floor-plans from which to cull ideas.

"DISTINCTIVE HOMES AND GARDENS"

give endless suggestions, covering every phase of building. No. 1—35 designs, $1000 to $6000, $1.00; No. 2—35 designs, $6000 to $15000, $1.00; No. 3—Combining No. 1 and 2 $1.50. Stock plans priced in each book. Descriptive circular sent upon request.

-The Kauffman Company-

621 ROSE BUILDING CLEVELAND, OHIO





KORO KRAFTS hand hammered copper ware has an intrinsic value with all the commendable virtues of service and beauty. The exclusive designs wrought in fine copper of exquisite coloring, give it a rare value greatly appreciated by the lover of beautiful and harmonious room surroundings. It is possible to select ornamental as well as useful things for the living room, the dining room, the library or den. Our free book will aid you in making selections.

THE KORO KRAFTS SHOPPE, 8625 Superior Ave., Cleveland, Ohio.

Save Coal

time and useless labor and get more heat. Easy to do if you install the

MOLINE SYSTEM OF HEATING

No noise, no air-vents. Turn off any degree. No pumps or automatic return valves—*"no more pressure than in your tea-kettle—and just as simple."* Interesting reading matter free.

Moline Vacuum-Vapor Heating Co.
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Savo Air Moistener

Filled With Water, Keeps the Air Right

When placed out of sight on the back of any steam or hot water radiator. It prevents furniture shrinking, pianos warping, wall paper cracking and saves DOCTOR BILLS.

Anyone Can Attach It

Price $2.00 Money refunded if not satisfactory after 30 days' trial. Order now or write for Free Booklet.

Savo Manufacturing Co., Dept. K, 5856 S. Park Ave., Chicago

which may be wrapped around a floor brush.

Blistering of Paint.

There is a house here that has been painted every two years for the last six years and the paint blisters and comes off from foundation up to about four feet from ground. It seems as though the paint will not set in the wood, although the same timber is used in the siding up to the gable. What is the cause and remedy for this?

It would have been much better if you had sent some scales of the blisters of which you speak. We would then be in a better position to tell you the cause of the trouble. It may be that the priming was ochre, or some other soft, gummy priming; or the house may have been primed with inferior material; and the lower part of the building being exposed more to the dampness than the upper parts, it would naturally peel off. As you describe the work, it is not the fresh paint that blisters, but the cause is in the priming coat, and the fresh paint when applied, only causes the under coats to lift up. If only four feet on the lower part of the house blisters, you can burn off that part and then apply for a new primer a thin coat composed of ⅔ turpentine and ⅓ raw oil, with sufficient driers. This will penetrate the wood and whatever remains of the old coat.

Painting Over Kalsomined Walls.

I have a room to paint the walls of which are kalsomined red with aniline color. I want to change them to a light brown or yellow, and would ask if you know of any sure way of stopping the red from striking through.

Shellac cannot be relied upon to give you a good foundation, and it would be unwise to put white lead and oil paint over any other coating. If you should use another kalsomine of a different color the red would almost certainly show through. The best thing to do is to wash off the old coat of kalsomine and varnish the walls, after they dry out, before putting on your new coat. This involves considerable work, but it will pay you in the end.—From Dutch Painter "Problems."

THE NATIONAL BUILDER

362 DEARBORN STREET
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Offers this
Great Building Opportunity:

12 complete plans with estimate of material and price . . . For **$1.00**

The plans are medium priced, up-to-date homes. The front, side and rear elevations with floor plans and details—drawn to quarter-inch scale, are on a

LARGE SUPPLEMENT
36 x 24 inches

Plans Drawn to Scale the Same as a Regular Blue Print and You Get One *Every Month*

A complete bill of materials with an accurate estimate of cost accompanies each plan.



THIS IS ONE OF THE HOUSES

It was planned by Chicago Architects, who rank high as designers

It is of moderate cost and the outside is of Plaster Work, now so popular.
Besides this, each number has other houses of low cost, including a Beautiful Bungalow with plans.
The writers, selected by Architect Fred T. Hodgson, Editor, cover the entire building field.
Send in the coupon and you may find something new and good for the new home you are planning.

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Put ME down for one year's subscription, for which I enclose $1.00 in money or stamps and THIS COUPON—which is good for $1.00 credit on the order.

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The "BELNORD," New York
OAK FLOORING Used. Largest Apartment Building in the World

Oak Flooring

Beautiful -:- Economical -:- Durable

Attracts your attention immediately
And it holds your admiration permanently

¶ OWNERS and BUILDERS find it a clinching argument to say "It's Floored with OAK FLOORING." It means that the tenant or the buyer will be glad to pay 10 to 15 per cent more. In color, it is **rich** and **cheerful,** and imparts an air of **refinement** and **elegance** to a home. **It is the modern flooring.**

¶ OAK FLOORING ⅜" thickness by 1½" or 2" faces can be laid over old floors in old homes, or over cheap sub-floors in new homes at a very low cost. **It is cheaper than carpets or Pine Flooring.**

¶ OAK FLOORING laid forty years ago in public buildings, after very hard service, is still in **good condition.** For **durability,** OAK is the **best.**

¶ There is a **solid satisfaction** and **lasting pleasure** in the **substantial** and **dignified appearance** of OAK FLOORING.

¶ A carpenter or handy man can lay OAK FLOORING successfully. It is very **profitable** work for any carpenter.

¶ Any truthful landlord will advise that OAK FLOORING is a **splendid investment.** Nothing else will **increase** the **renting** and **selling values** like OAK FLOORING.

Write for booklet

The Oak Flooring Bureau

884 Hammond Bldg., Detroit, Mich.

Heating, Lighting and Plumbing

An Electric Lighted Farm.

LAST Friday the installation was completed at the farm home of Adolph Peterson, south of the city, of what is claimed to be the first up-to-date complete system of electric lighting on a farm home in this county. The system consists of a dynamo, switchboard, batteries and a gasoline engine to run the dynamo. The engine, it is said, is required to run but two hours to operate the lights needed. The electricity is stored in the batteries, and is only drawn upon as occasion requires. After the initial cost of the equipment is met, it is stated that the expense is less than the use of kerosene. Mr. Peterson has twenty-two lights installed in his house, barns and silo. The dynamo is useful in many ways about the farm, as the current can be employed to separate cream and do many other things requiring power. The batteries yield a steady white light, without the reddish tint often seen.—Exchange.

* * *

In view of the present craze for open windows and open air schools, the following extracts from the brilliant speech of Prof. William J. Baldwin before the New York Chapter of the American Society of Heating and Ventilating Engineers will be found of interest and value. The speech was occasioned by the proposed new building code for New York City, which contained no provision for ventilation of buildings except by the windows.

Ed. Note.—We have space for only a portion of this interesting speech, as reported in Heating and Ventilating Magazine.

"There was no heating and ventilating magazine forty years ago," began Mr. Baldwin. "In 1859 a ventilating system was installed in the Capitol at Washington, which is still running. The centrifugal fan in this installation has a 13-ft. wheel with wooden blades.

"Sheet iron stoves were in use in the New York City public schools as late as 1880. Today the ventilating apparatus in New York's school, in my judgment, is better than any system that I know of.

"The tendency of the present time is to call ventilation by open windows 'natural' ventilation. Previous to about 1880 there was nothing but natural ventilation in the schools of New York. The death of Miss Gibbs, a prominent school teacher of those days, who died of malarial fever attributed to natural ventilation, caused a hue and cry and drew attention to the almost entire lack of ventilation in the New York public schools.

"Systematic ventilation is not new, and it has been hashed and rehashed from the time of the building of the Parliament houses in London by Sir Christopher Wren to about 1880 without any material progress being arrived at. About 1880, however, not only New York, but all the great cities of America, came to the conclusion that the schools, at least, should be systematically ventilated, and the progress of the art from that time to the present has been systematic and in the right direction, because there were magazines which then began to give particular attention to this subject, particularly The Sanitary Engineer.

"Since 1880 the progress of the work has been recorded and encouraged, and until quite recently the heating and ventilating engineer thought that he was arriving at something like a state of perfection.

"A London manufacturer, however, who made weather-cocks and chimney-tops, discovered that systematic ventilation was 'a joke,' and he issued expensive pamphlets under the guise of being reports of Royal Commissions, to show that the effort made in the improvement of ventilating in closed spaces since the time

New Roofing Discovery

Works Wonders in Beautifying Home!



For Simplest and Grandest Homes

CHARMING Moorish beauty and dignity of appearance of Metal Spanish Tile gives an air of distinction to the home graced by this wonderful new and practically indestructible roofing.

It has taken home builders of America by storm, for it is the modernization of the wonderfully beautiful roofs of historic Spanish edifices.

The art of making this roofing, left behind by fleeing Moors driven out of Spain centuries ago, until 1910 could not be made practical for the modern home, despite its alluring beauties.

After years of experiment, we have hit the solution. That is why today we are able to offer American homes the amazing attractiveness of

Metal Spanish Tile Roofing

Its scores of vital, practical advantages cost no more than common roofing, yet mean tremendous economy—it needs no repairs and outlasts several ordinary roofs because of its practically indestructible metal construction.

It is absolutely wind, weather, storm, fire and lightning proof.

Easy to apply. No soldering, no special tools—any ordinary mechanic can apply it. Interlocking system by which tiles dovetail into each other makes the roof absolutely water tight and provides for expansion and contraction perfectly—summer and winter. It is guaranteed non-breakable.

HOME-BUILDERS — Simply send us today the dimensions of your building and we will tell you by return mail exact cost of all material. Our new 1912 book on beautifying the modern American home by use of **Metal Spanish Tile** is yours for the asking. A postal will bring it. Address

The Edwards Manufacturing Co.

The Largest Makers of Steel Roofing and Metal Shingles in the World

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Heat Expense Cut ½ to ⅔ by the UNDERFEED

Write for **FREE BOOK**

Now is the Time to Prepare for Your Winter Heating

WHY burn money in excessive coal cost? The Underfeed will cut your coal bill ½ to ⅔ **every winter.**

In the coal bin
the Underfeed effects its first saving, for it perfectly burns cheaper grades of hard and soft coal —coal which would smother fire in other heaters—thus saving $2 to $3 on every ton.

Smoke and gases
which represents a waste of 25% to 40% in topfeed heaters, pass up through the fire in the Underfeed and are consumed. Result—*more* heat, *clean* heat as well as *cheap* heat—no smoke, no clinkers and but few ashes. In

THE PECK Williamson Underfeed FURNACES BOILERS

coal is fed from below; fire is on top and sides in direct contact with the most effective radiating surfaces. In ordinary or topfeed heaters, fire is on the grates—far removed from the heating surfaces.

Don't waste good money patching up your unsatisfactory heater or installing an inferior one. Get an Underfeed; it will soon pay for itself and then *save you money the rest of your life.*



Cut-Out View of Underfeed Furnace

A. M. Trenholm, Rockford, Ill., wrote May 27, 1912: "During the eight years I have used the Underfeed Furnace, I saved more than $50 each year in fuel besides keeping my house thoroughly heated during the coldest weather. The furnace is in just as good condition as when new."

Fill out coupon below for descriptive Furnace or Boiler Book and testimonials enthusiastically endorsing Underfeed economy and efficiency.

Free Heating Plans and Estimates Prepared for You by our Engineering Department. Write TODAY.

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Underfeed Furnace Book_____ Boiler Book_____ (Indicate by X Book you desire)

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of Sir Christopher Wren was an entire failure, and that the only way to secure fresh air was by 'natural means and his chimney-tops and weather-cocks.' His method of louvred windows and weather-cocks might do for southern Europe, but I am of the opinion had he lived in Canada or the northern states of America that he would have slightly modified his opinions and not have sent his literature over here.

"When the speaker was a boy in the old-fashioned school houses of more than sixty years ago, there was nothing but natural means for ventilation. These means, however, we could not use in cold weather, and I remember distinctly that we not only put sand-bags along the lower edge of the outer door, but that we put listin around the cracks of the doors and windows, and frequently stuffed the keyhole to keep out the wintry blast (there were no rubber weather strips in those days).

"Advocates of systematic ventilation conceived the idea of admitting fresh air through an especially prepared opening and of placing some kind of heating surface in the opening. It was crude at first, but it developed, and will still develop, if the desire to return to primitive methods will cease.

"Natural ventilation is no ventilation. Systematic ventilation has some pretence. It, at least, provides means of admitting air to a building other than through keyholes or at the door threshold, and it leaves the windows so that they can be opened, provided the apparatus is properly designated. In this respect systematic ventilation is as good as natural ventilation, and it has the advantage that if you do not like your bread buttered, you can leave the butter off and eat the bread dry.

"In the matter of hospitals, it probably has been shown that more recoveries take place under canvas or on screened porches than in the hospital wards, and this fact, if it is a fact, in all cases, will justify the physician in putting his patient out of doors or in removing the window sash, but the same methods cannot be applied, at least to schools in crowded cities.

"A child can be taught in the open air, if the child is properly clothed for it, and it may be the little brain is capable of a greater effort, but little children who have laid aside their wraps and who have wet feet and moist clothing cannot be educated in a shelter tent, nor can sufficient fresh air be admitted to an ordinary classroom containing forty children in cold weather through open windows. It would not only cause the children discomfort and suffering, but it would cause sickness and inflammatory troubles, and perhaps death.

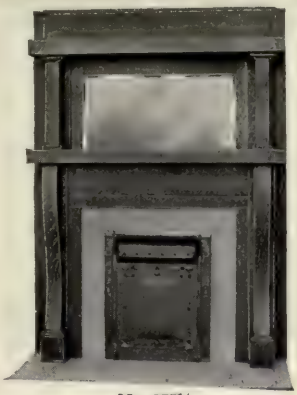
"The condition for the school room and the condition for the hospital are entirely different problems and should receive entirely different treatment. The amount of air required under the law of the state of New York for schools cannot be admitted by open windows in cold weather.

"Ventilation by open windows is a very old subject. I believe, however, that apparatus can be constructed that will ventilate a building without requiring the opening of windows. I am of the opinion, though, that all apparatus should be so constructed that the opening of the windows would not destroy the balance, so as to meet the objections of the natural ventilation agitators."

The Other Side.

Physical tests of the air comprise the use of the thermometer, hygrometer and barometer, together with estimates of the cubic feet of air supplied and removed in a given time by mechanical means. With them are often combined automatic regulators, such as the thermostat. As these tests imply the use of instruments of precision, the results of which may be stated in terms of mathematical or graphic terms, they are naturally impressive to the minds of those unaccustomed to observe the more subtle and delicate phenomena of the human respiration and circulation.

Hence the advocates of the ventilation of hospitals and schools by "systems" which preclude the opening of windows adduce impressive figures to prove the correctness of their views. But, on the other hand, experiments are being gradually accumulated which tend to place direct observation of the respiratory and circulatory mechanism upon an equally definite basis.



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"REPUTATION AND QUALITY COUNT"

$28.60

For this elegant, massive selected oak or birch, mahogany finished mantel, beveled mirror 18x36,

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Price includes our "Queen" Coal Grate with best quality enameled tile for facing and hearth. Gas Grate $2.50 extra. Mantel is 82 inches high, 5 feet wide. Furnished with round or square columns as shown in cut.

Dealers' price not less than $40.00.

Central Mantels

are distinctive in workmanship, style and finish and are made in all styles—Colonial to Mission. **Catalogue Free**—Will send our new 100-page catalogue free, to carpenters, builders and those building a home.

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SAMSON
SPOT SASH CORD

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Solid Braided Cotton

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Both Architect and Owner

profit by specifying Samson Spot Sash Cord. The **owner** has a cord that will outwear any other material many times over and will prevent the annoyance and expense of breaking window cords. The **architect** has the reward of a pleased client. Can be distinguished at a glance by

the "Spots on the Cord"—Our Trade Mark

Smooth and firm, guaranteed free from rough places. For sale by hardware dealers. If your dealer cannot supply you order of us direct, giving his name. Write today anyway for sample and our illustrated booklet No. 4, showing various kinds of Samson Cord. A handy guide to buying.

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Make Your Own Gas



THE pleasure of living in the country or small town is greatly enhanced by a few city conveniences, the most necessary and comfort giving of which is a **Satisfactory Gas Supply.**

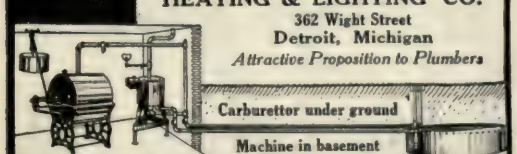
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This Handsome Fireplace Complete $38

Complete and ready to install. Includes Andirons, Wrought Iron Fender and the famous Colonial Head Throat and Damper. Selected face brick, choice of either rough or smooth texture in many colors. Complete with working plans, ash trap and color for mortar. Size 6 ft. wide, 4 ft. 6 in. high to shelf, 9 ft. to ceiling.

Write for Portfolio or FREE Booklet

Send 25c in stamps for our handsome and instructive portfolio showing many different designs in fireplaces. Or write us today for our booklet, *"Home and the Fireplace,"* FREE.

COLONIAL FIREPLACE CO.
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SPLINTERS AND SHAVINGS

The "Disappearing" Kitchen.



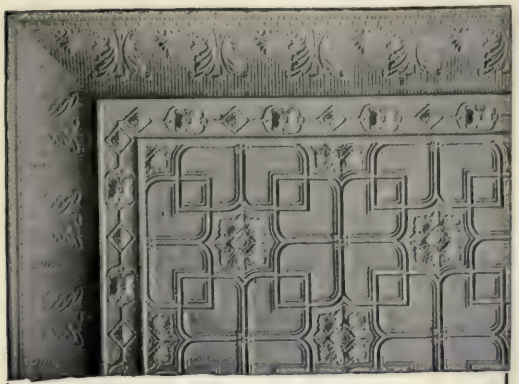
N one of its monthly reports the California State Board of Health comments as follows upon what has come to be termed the "disappearing kitchen:"

One of the problems of modern city growth is the condensation of the large, comfortable, family country homes of our forefathers into homes 10 ft. x 12 ft. x 50 ft. piled eight, ten or more high and flanked on either side by similarly condensed homes. These houses can have light only from windows in the front and back sides, and occasionally the diffused light from an air shaft. The only front yard is the fire escape; the only back yard is a narrow porch, and the limited air space made usable by an aerial clothes line. Under these conditions it is to be expected that disappearing beds, gas mantels and other similar devices for economizing space will be popular. To meet this demand has come what might be termed the disappearing kitchen. Just as the spacious, well ventilated old bedroom, with its wide-chimneyed fireplace, has been superseded by the small, illy-ventilated room which serves in the added capacity of sitting room by day, so the great, open, cheerful kitchens of old are being superseded by the twentieth century kitchenette. Limited facilities for cooking and serving meals mean limited range of foods which may be considered for the table. Through invention and clever application of the scientific principles of food preservation this limit has been gradually extended until the tin-can dietary may be made to cover nearly all the ordinary demands for proper food, but the cook must know her trade or the family will severally suffer. It is probable that the "disappearing" kitchen plays a large part in the present-day prevalence of many diseases and functional disorders, especially of the alimentary canal. —Building Age.

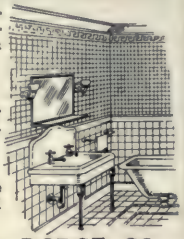
Why Buildings Cost More.

Replying to yours of recent date as to "why" the high cost of building in these days, when the lumbermen are being charged with all kinds of high crimes, I want to give you some figures showing just where the "high cost" comes in. This is a concrete case. The house was erected in this city (Lexington, Mo.) during 1911, and is an eight-room modern house. The contract price was $3,700. If this house had been erected in this town 26 years ago, when I first went into business, or if it had been erected in the country last year on a good Lafayette county farm, which has been doubled and many times trebled in value in the last ten years, the following items of cost would not have been added to the original cost for the reason that most of the items were not then a part of a home or would not now be a part of an average country house:

To original contract	$3,700.00
By difference in excavating all of basement instead of cellar only	25.00
By extra on brick foundation by reason of excavation entire basement	75.00
By heating plant instead of stoves bought as furniture	250.00
By sewer connection (none used in country or 26 years ago in town)	50.00
By gas pipe and connections (none used in country or 26 years ago in town)	25.00
By electric fixtures and wiring instead of coal oil lamps	175.00
By bathroom outfit, not in use generally then or on farm now	250.00
By six closets built in house instead of wardrobe bought at store	150.00
By kitchen cabinet and china cupboard bought at store	80.00
By sub-floors in house not formerly used	70.00



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I think the above answers the question as to the high cost of this particular house; and this example is but an illustration of what are facts in all modern house building.—I. R. Moorehead, in American Carpenter and Builder.

Gutters.

The question of gutters on a house has long been a perplexing one to both client and architect. Our ancestors seem to have done without them and to have been little disturbed by the damage done to paths, grass and flower-beds when the rain poured from the roof. We moderns, in trying to avoid this, have invented all sorts of contrivances to carry the water along the roof to the leader. Of these the standing gutter and the hanging gutter are the best known. In an ordinary house that lays no claim to distinction either of these types will serve the purpose, but the truth is, they are both most inartistic. The hanging variety, as a rule, is made of galvanized iron or copper and is at best a flimsy-looking affair that hides whatever crown moldings may be on the eaves, and that conflicts, by reason of its downward pitch, with the horizontal roof lines. The standing variety is built in on top of the eaves, generally on the roof boarding, though sometimes let into the rafters to further conceal its ugliness. Unless exceptionally well constructed it rots out in a short time, being much affected by continual thawing and freezing of snow and ice in the gutter. When so many disadvantages can be charged against these two most employed types of gutter it seems strange that the really best kind—one that has been known for a long time—should not be more generally used. We refer to the simple V-shaped hanging gutter built up of two boards screwed together. It may be hung level to conform with the architecture, as the necessary pitch is secured by laying a scant strip inside at the bottom of the V; and it may be made something of a feature by having fine wrought iron or cast copper brackets to support it.

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* * *

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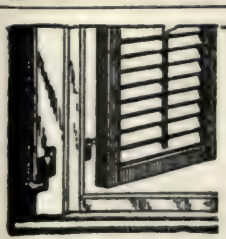
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New Booklets and Trade Notes

THE Oak Flooring Bureau have gotten out a second edition of their small but comprehensive booklet on Oak Flooring, which is full of valuable information to builders. It tells how to arrive at the amount of flooring required, all about handling, laying, scraping and finishing. It is to be had for the asking from The Oak Flooring Bureau, Detroit, Mich.

* * *

Although Keith's Magazine is devoted more especially to the building of homes, the catalog we have just received from Love Bros., Inc., Aurora, Ill., is of such high order and so superbly gotten up as to merit special comment. Modern Store Fronts is the title of the large catalog, bound in imitation white vellum, with raised lettering and a delicate cover etching which is a true work of art. It is filled with illustrations of the line of goods manufactured by this firm.

* * *

Catalog 22 of the Conn. Telephone & Electric Co., Meriden, Conn., presents the latest and most improved designs in interior telephone apparatus, with illustrations and list prices of the different types of instruments. Specifications for installing are contained in an appendix. This very complete catalog is of great interest to all builders.

* * *

The Kewaunee Co., Kewaunee, Wis., send us their catalog of Laboratory Furniture, which includes a complete line of everything required to equip educational institutions, also Domestic Science and Domestic Art Schools, with the latest first-class furniture and fixtures. The catalog will be sent free to any one interested in these specialties.

* * *

Among the specialties of the H. W. Johns-Manville Co. are the Frink Reflectors, set forth in their catalog. Modern Store Illumination, illustrating designs and giving prices.

We have received from the publishers, Fredk. J. Drake & Co., Chicago, a new book on Modern Illumination, Its Theory and Practice, by Horstman and Tousley. The authors, who have published several valuable works on practical scientific subjects, have given here a handbook of practical information of great value to architects, contractors and electricians as well as interesting to all users of electric light. The chapter entitled Practical Considerations, will appeal specially to many outside of trained electricians. The volume is handsomely bound in dark green flexible covers and contains 275 pages of interesting matter. Price $2.00.

* * *

The Geo. B. Carpenter Co., Chicago, have just moved into their own fine new eight-story building, and are prepared to do a larger business than ever in their line of Marine Hardware and Yachting Equipment, Rubber Goods, Tents and Camp Furniture, and many other specialties for each of which they issue catalogs.

* * *

The B. O. T. specialties in high grade Plumbing Fixtures, the company's headquarters in Minneapolis, Minn., are very handsomely set forth in their new catalog just received. The B. O. T. trademark is the guarantee of superior excellence.

* * *

The Detroit Heating & Lighting Co., Detroit, Mich., publish a real book—Light for Evening Hours—in which is set forth the advantages of their new method of producing gasoline gas for town, village and industrial lighting plants, as well as club houses or any consumers who require private plants.

* * *

The Reznor Co., manufacturers of Gas Heating Stoves, Mercer, Pa., have a booklet of decided interest to home builders, describing and illustrating their product in its various types, with the improvements in construction attained by long experiment and improved machinery.

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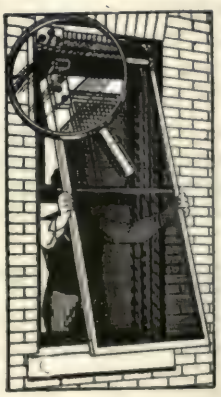
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* * *

Circular S C of the Chicago Faucet Co. covers the fixtures manufactured by this firm in a specially neat, handy and pleasing manner. We all know what an annoyance faucets that don't "work" can be and the excellent quality of the special features here illustrated is self-evident.

* * * *

We are in receipt of an interesting catalog from the Conrey Davis Mfg. Co., Shelbyville, Ind., who thus make our acquaintance as manufacturers of first-class furniture for offices and hotels. The pages of this catalog show good workmanship and good design.

* * *

Heating systems are of perennial interest to home builders. The atmospheric system of steam heating stands in a class by itself. The booklet of the American District Steam Co., Lockport, N. Y., describes their system and shows how by its simplicity of installation and operation it is adapted to all classes of building, residence as well as public.

* * *

The "merrie month of May" brings forth the florist and landscape gardener. A new aspirant for favor among these is Harry Franklin Baker of Minneapolis, Minn., who compliments Keith's Magazine with his artistic catalogue. Mr. Baker will be pleased to correspond with any home builder contemplating landscape features or shrubbery planting, and is also prepared to furnish superior bedding plants.

* * *

The ingenious booklet—The Fly Outside—sent out by the Watson Screen Manufacturing Co., Jamestown, N. Y., is one of the best pieces of advertising we have seen. The very realistic cover shows a window completely equipped with shade, curtains and even to the cushions on the seat beneath, and between the parted draperies a tiny, actual screen with two flies outside. Inside the booklet, the Watson twentieth century method of screening is set forth.

* * *

The Northern Pine Manufacturers' Association has begun monthly issues of an attractive little publication which they call the Pine Cone, which is sent free to all interested in white pine, on request. The aim of the publishers is to impress upon the building public that the old favorite building material is still produced in quantities ample for all demands. A question and answer department, or information bureau, is included in the contents.

* * *

A garage should be built to exclude all dampness, as moisture will cause much labor to keep the brasswork clean, and will also corrode part of the machinery.

* * *

The Hydrex Felt and Engineering Co., New York, issue a circular describing their products of Waterproof Felts, Building Papers, Roofings, Paints, etc., and most attractively illustrated. Sent on request.



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Harding & Seaver, Architects. AMONG THE BERKSHIRE HILLS IN MASSACHUSETTS. (See page 254).

KEITH'S MAGAZINE

VOL. XXVIII OCTOBER, 1912 No. 4



Wilson & Loveless, Architects.

ENGLISH TIMBER WORK ON A PLASTER HOUSE.

When Houses Are in Good Taste

By Charles E. White, Jr., M. A. I. A.

WHY is it some houses give us a thrill of joy when we look at them, others producing a feeling of depression; real annoyance oftentimes, hard to describe, but no less surely felt? Why does one house seem to have an air of refinement about it, while another thrusts itself boldly forward and demands our attention so insistently that it seems to stand out rudely from its neighbors?

We may notice the same thing in houses that we observe in persons. One's personality, pleasing or displeasing, is no stronger than the personality of a house, which is bound to affect the observer in

one way or another—giving him a feeling of pleasure or displeasure, as the case may be.

When an unattractive house is new, fresh from the hands of the painters, it may look inviting to the layman who has not been trained to understand the difference between a good or a bad design, but once let the new look wear off and the design comes out in its true colors, understood by almost every one. A dull, uninteresting design proclaims itself as such to everybody. Though not always aware just what is the matter, almost every passer-by can tell that something is wrong with the house. There is something lacking—or something has been applied to the design which produces a displeasing result, and the beholder makes the involuntary comment, "I wouldn't want a house like that."

The difference between a well designed house and a house poorly designed is sometimes very trifling, yet the variation in result is remarkable. Taking two houses with the same floor plan, two designers might build them side by side and they would be so totally different in appearance one would not suspect them as having the same arrangement of rooms.



THE CHARM OF WIDE SIDING, PAINTED WHITE, WITH BRONZE-GREEN SHUTTERS.
(Note the Simple Entrance Hood.)

One designer, by merely locating doors and windows in an artistic way, might get a result successful from every standpoint, while the other, less skillful, might commit so many blunders in the arrangement and proportions of his doors and windows as to spoil the exterior appearance of his house.

Windows have tremendous importance in the design. The way they are grouped —their width and height, and the amount of solid walls surrounding them



PLASTER HOUSE WITH CASEMENT WINDOWS WELL GROUPED IN PAIRS.

all contribute to the result. Prospective house owners will do well to examine windows in the attractive houses in their neighborhood with the idea of discovering just what it is that proves so charming in the design. (Fig. 1.)

As a general proposition single broad windows look better than single narrow windows. The latter look well in groups, but when isolated a narrow window usually presents an unattractive appearance. For houses of moderate size single windows about 3 feet wide and 4 feet 6 inches high usually look pleasing. Frequently (in a living room) the width is increased to 3 feet 6 inches or 4 feet. Many small houses have windows 5 feet or 5 feet 6 inches high and they are apt to be out of proportion on a small house, looking less attractive than shorter windows.

The best looking windows do not have one large sheet of glass in the upper light, with a large sheet in the lower. The upper light should be cut up into small panes, especially in small houses. The divisions between panes can be of wood, or lead or metal bars can be used.

Blinds have a more decorative value on a house than many think. Old-fashioned houses in eastern and southern states, so often painted spotless white, invariably have bronze green blinds. Though originally intended for strict utility, blinds or shutters have come to be recognized in modern work as pleasing in appearance, and many architects use them to add color to the design. Houses painted white are quite ghastly in appearance unless there are green blinds at the windows to give a pleasing contrast with the white paint.

Green trellises applied here and there also do much to make a design more interesting.

At no spot in the house is good design so necessary as at the front entrance. The most noticeable place in the house, an entrance door produces immediately an effect, good or bad, according to the skill of the designer. As a general thing one will be safe in having a simple doorway with a little porch, reached by as few steps as possible. Often, merely a simple hood, supported on brackets extends over the entrance to shield the doorway from wind and weather. (Fig. 2.) Well designed, such an entrance is very engaging. More and more achitects are placing the veranda away from the front of the house and the result is very successful. With a porch entirely across the front a house is depreciated in appearance and windows are darkened. A porch placed at one end usually looks well and makes possible a good view from front windows.

Frame houses are covered with a variety of different materials. One can choose almost any kind of finish with the assurance that the result will be pleasing when the materials are used understandingly. Cement plaster on wood laths or metal lathing makes an excellent exterior coating for any house. As cement lacks color it is always wise to paint window frames and cornices some pretty shade of green or brown—some color that contrasts well with the grey of the plaster to "warm it up." That is one reason why "English-timber-work" houses are so attractive.

Wood siding, wide or narrow, is attractive when stained or painted. If siding is used, stained, try putting the boards on with the rough side out, as rough surfaces take stain much better than smooth surfaces. Siding is most at-



Tallmadge & Watson, Architects.

BROWN SHINGLES AND GRAY PLASTER MAKE A PLEASING EFFECT.



Frank Lloud Wright, Architect.

WIDE PLASTERED EAVES ON A WESTERN HOUSE.

tractive, usually, when it is mitred at the corners, no corner boards being used.

Shingles are excellent for exterior covering. They take stain beautifully and are as durable as any other wooden covering. Shingles look best mitred at the corners (using no corner boards). A sort of rustic appearance is given to the building when shingles are used in this way. (Fig. 4.)

Not the least important part of the house design is the cornice, for a well-designed cornice will do much toward promoting the ultimate effectiveness of the building. On a Colonial house the cornices should be daintily moulded, but in many other styles plain boards are practical and attractive for cornices. Often, a simple board along the edge of the roof is all that is necessary, and a hanging gutter of galvanized iron gives all the finish required. In this case the gutter should be applied practically level, for a hanging gutter with as harp slope is very distressing, making the edge of the roof look as though it was out of level. There is really no reason why a gutter should have so steep a slope. Water will run through a gutter readily when it is almost level.

Whether overhanging eaves are used or eaves without overhang, there need be no difference in the resultant success of the design. Just now, in the West, most houses are built with an overhang of three feet or more, and a cornice treated in this way is very good looking. On the other hand, eastern architects continue to use roofs with very slight overhangs and the result is quite pleasing. When eaves overhang one must be careful to build them securely or they will sag. A roof overhanging 3 feet or more should have plenty of projecting timbers to support the weight of the roof.

On plaster houses it is well to continue the plaster surface up under the eaves as well, for plaster is a durable material used in this way and makes a good appearance. (Fig. 5.) On houses covered with siding or shingles sheathing is usually applied under the eaves.

Color makes a great difference in the appearance of any house so after the

house is built the exterior color should be chosen carefully, to avoid spoiling the effect. Badly chosen colors have ruined many a house which would, otherwise, have been very attractive.

White houses with green blinds are almost always pleasing. Houses with an exterior covering of shingles or rough siding can be stained golden brown or olive green with good effect. Houses treated with English-timber-work should have the wood trimmings stained or painted nut-brown or bronze green.

Red is a difficult color to use in paint. Some of the soft shades of Indian red look well on a roof, but brilliant shades of red are not attractive. As a general thing colors that are soft (not strong or violent) are more pleasing than any others.

Greens and browns harmonize perfectly when the right shades are chosen. Brown side walls with a green roof, or vice versa, are good combinations. Yellow should be used sparingly.

Good taste houses are in evidence everywhere, as well as bad taste houses. The wise house owner will do well to examine all the new houses he can reach, studying carefully their good points that he may understand just wherein they are successful. Then he can apply the information to his own problem. Good taste houses are always in good taste. They never go out of style, nor do they depreciate in looks as the years go on. Old houses that are most admired today were good taste houses from the beginning. That is why they remain so pleasing today in spite of changing styles and fancies.

The Modern Kitchen

By Kate Randall

THE modern kitchen, white and shining, lined with convenient cupboards and drawers for every thing, is a most fascinating place. It may be an electric kitchen, with no end of labor-saving devices, beautiful, but expensive, and only possible for the fortunate few, or it may be simple, the average kitchen of the comfortable home, and with this we are chiefly concerned. In either case it must not be too small, particularly if there is no butler's pantry. The much exploited kitchenette is apt to be a stuffy place. There must be room for air and sunshine and a sweep of breeze now and then. Once we thought a kitchen must necessarily be in the rear, but now when there chances to be a fine view at the back the kitchen is more often in front, with an entrance at the side into an orderly green yard, with picturesque wicket and artistic fence. Everything as spic and span as the drawing room entrance. The ideal kitchen is in an L with windows on opposite sides—here the ventilation can be perfect and space secured for a comfortable seat in an undisturbed corner, where the worker may snatch a moment's rest with book or needle work. Generally, where economy is not a great factor, the walls and ceiling are of white tile and the floor of hardwood, though I have seen several kitchens where the floor was also of the tile, like the bath room, but many complain that these floors are cold and hard and tiring to the feet, though very nice rubber mats come to lay before the sink and range where there is the most standing.

Under broad windows is the sink—porcelain with hygenic wood stone drip boards. The walls are lined with glass

cupboards and below these drawers and low tight cupboards for supplies of every kind.

Drawers with removable tin linings for bread and cake are very nice, though there may be an ice box, a cooler is invaluable, it is generally built in a corner, is about 2½ feet square and reaches from floor to ceiling, inside there is a netted opening in the floor and in the ceiling, so



THE MODERN KITCHEN—WHITE AND SHINING.

arranged that a constannt current of fresh air passes through. The shelves are of netting and everything thoroughly hygenic, a most convenient place for food that does not need ice. Another tall cupboard is just the width of the ironing board, which is hinged against the back. When the door is opened and the board let down, a plug for the electric iron is exposed. One of our illustrations shows a built-in hood over the gas range. This has an air outlet into the chimney and affords perfect ventilation when cooking. A small table with glass top is a very great convenience. It may stand beside the flour and spice cupboard when baking is in process or it may be moved near the range when needed. Brass handles at each end add to its convenience. When there is no butler's pantry, only the buffet kitchen, the glass cupboards should stop about 18 inches above the small lower cupboards, leaving a shelf the whole length and width of these cupboards. This is a very nice arrangement in serving, providing plenty of shelf room for the dishes as they are removed from the dining room. The lack of shelf room is often a serious objection to the buffet kitchen.

Do not build too small a pantry. In many fine houses, where money has been lavished on the front of the house, the pantry was small and inconvenient. Almost every one regrets this later when changes are so expensive.

The simplest kitchen may be made very

attractive. Blue and white are always the prettiest colors. A wainscoting of alpine, painted white, and woodwork of the same color. The walls above also painted a light blue, with linoleum to match. Small plate racks, with a narrow shelf above and below, for the blue and white platters and plates, bowls and pitchers constantly in use, are a pretty decorative feature. The most fascinating blue and white jars, cabinets, sold at all prices, are less expensive than the built-in cupboards. For those who dislike the chipping of enamel ware, the aluminum ware is ideal. It is expensive at first, but with care will last a lifetime. Does not burn on and has no end of virtues. The blue and white plaid linen dish toweling makes nice curtains. If one does not care for long curtains, a short valance, some 18 inches



A BLUE AND WHITE KITCHEN WITH ALUMINUM UTENSILS.

labeled for all sorts of sugar and spices, may be had for a very small price. I have also seen a yellow and white kitchen that was very pretty. White woodwork and yellow walls and dishes of the pretty white lined brown ware that is so popular just now. If you cannot have glass cupboards, make the doors of wood, but have them so arranged that one may stand at the sink, wipe a dish and put it at once into its place in the cupboard. Many steps and many motions are economized by this arrangement. Cooking deep, is a pretty finish for the tops of the windows. Japanese towels are very pretty used in the same way. Kitchen aprons may also carry out the color scheme in blue and white checks. If one will give a little thought to the building and furnishing of even the simplest kitchen the daily drudgery may become a pleasure, if not almost a work of art. It is not so much what we accomplish in this world, but the joy in the doing, that counts for happiness, and where this joy is lacking life is largely a failure.

Some Types of Modern Design in the East

From a Summer Note Book



NOVEL CONSTRUCTION IN MOST ATTRACTIVE FORM.

THE vacation traveler taking a leisurely trip through eastern Massachusetts, finds many interesting examples of the newer types of domestic architecture in the homes, ranging from modest comfort to stately elegance. Especially in the suburban districts, one finds charming dwellings, picturesquely located, sometimes among lofty elms or century old spreading oaks, sometimes near a rocky coast with the mystery and charm that water always lends.

The house shown on this page is one of these. Located at Bar Harbor, Me., on a picturesque and rocky coast, it possesses in addition to its charm of situation the interest of an unusual and novel construction. Our view is of the rear side, but the front faces the bare, surf-washed rocks and the dark green of the firs, while afar off the coasters go sailing by, and the dories of the fisher folk. Large selected field stone—some of the boulders so immense they might have been the doors of some cave dweller—are com-



AN AIR OF DUTCH STURDINESS IN THE GAMBREL ROOF AND SNUG DORMERS.

bined with silvery, native birch logs, in a construction as novel as it is attractive. The high, steep-pitched roof, with its boulder chimneys, gray as the boulders below, rises among the trees like some mountain chateau. The unusual placement of the many windows with their multitude of small panes and framing of rough, unsurfaced boards gray stained, is a most distinctive feature.

Our frontispiece shows an exceedingly interesting suburban residence, the home of Dr. Jacques, at Lenox, picturesquely located among the Berkshire Hills of Mass. One can easily sympathize with the choice of an English prototype for this situation. Not only is it natural for American work in general to seek inspiration in the beautiful styles of the Tudor period, but it was felt at once how admirably this background of beetling hills covered with its dark trees, would bring into relief the design so frankly borrowed from the older English country houses. The native stone, too, with its red, brown and yellow coloring, so admirably composed with rough cast cement of a greyish white and roof shingle stained a darker grey—is wonderfully effective in this setting. The feeling of English design is strengthened by the luxuriant growth of ivy on the walls—our American ivy, the Englemann Ampelopsis—but quite as effective as its English rival. Such an exterior surface is ideal for this permanent decoration of vines, inasmuch as there is no necessity for painting or renewing and consequent destruction of years of growth. This house is not a copy, but an adaptation of English country house architecture, and the excellent handling of its horizontal lines, the centralization of the windows and the effect of proportion and symmetry throughout, have resulted in an example of eastern design well worth study. Nothing, perhaps, could be farther removed in style from the house we have just been considering.

The house on Clinton Road, Brookline, Mass., has several interesting architectural points, features which developed out of the peculiar sloping site, as the front enters from the street level, from which the ground slopes sharply down. The rear portion of the house is designed to meet this lower level, and contains the cellar, laundry and other service portions. The secondary roof over this portion, breaking into the main roof and following its lines, is very pleasing.

The exterior is simple, but dignified, and charms by a certain directness of style. The long slant of roof in front is relieved by well proportioned dormers, and the pergola character of the porch adds grace. The plain broad surfaces of natural grey cement and the grey shingles above are set off by the green blinds and green roof. The beauty of shingles in these eastern coasts is largely due to the effect of the salt atmosphere, which turns them to a delightful silvery grey that is a charming contrast to the green blinds so prevalent. A small detail of this design deserves mention, viz., the manner in which the architect has handled the matter of gutters. These necessary evils, usually a blemish on the building, are here made to seem really a pleasing bit of detail, with the exception of the waste pipe carried down the cement column of porch, where it is really a defect. This well balanced house, costing $8,000, is an encouraging example of what may be done by the man of moderate means.

One illustration shows a house in Dedham, Mass., near Boston. There is an air of Dutch sturdiness in the gambrel roof and close dormers that hug it tight, with a decided Colonial character to the white entrance. The siding of the first story is painted a light grey. The shingles weathered to a silvery tone and the roof shingle almost black. In its trim compactness it is a typical eastern house.

Illustrations of eastern types of dwellings would be incomplete without the cement house, which though not perhaps so



E. B. Stratton, Architect.

HOUSE ON CLINTON ROAD, BROOKLINE, MASS.

universally prevalent as in the west, has many fine examples and is growing more and more in favor.

The illustration shows a stately and dignified composition, a home in Milton, Mass., a Boston suburb noted for beautiful homes.

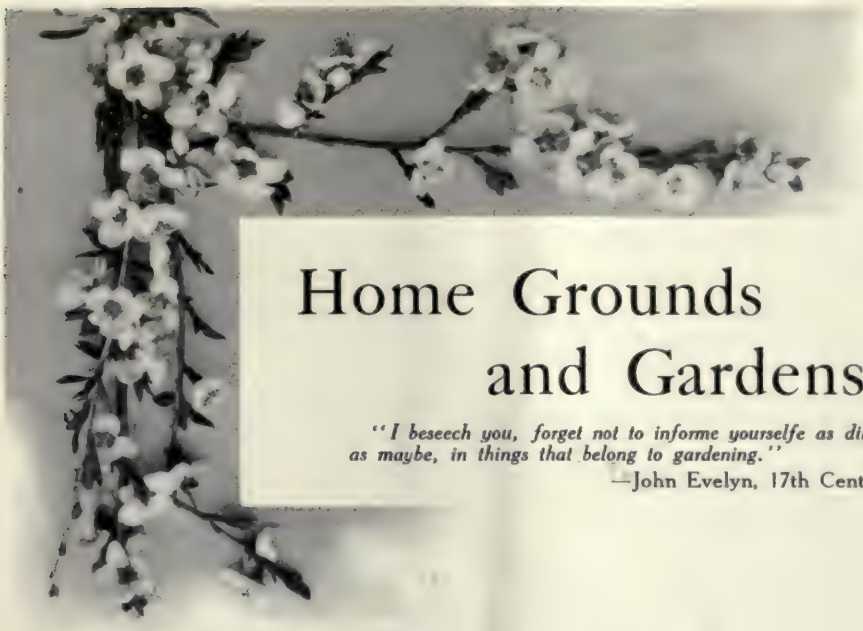
windows relieves the otherwise severe surface. The chimneys, the foundation wall, also the underpinning of the porticoes are of grey brick, while the caps of the curbs, the steps and the porch columns are finished with granolithic, composed of white cement and white marble



George Ingraham, Architect. THE ARCHITECT HAS FOLLOWED ONE HARMONIOUS IDEA.

The architect has followed one harmonious idea, instead of patching together a motley of different effects, as is so often the case in stucco construction. The eye rests with pleasure on the reasonable wall spaces of plain cement, innocent of decoration, but sufficiently and effectively relieved by the green shutters and the porch projections. The simple cornice molding above the second story

dust. The roof has acquired the soft grey of shingle left to weather in that section. These are but a few instances of the trend of suburban architecture in the east, which increasingly shows more and more attractive and successful housing developments that contrast conspicuously with the ordinary and hopelessly commonplace aspect of most of the eastern towns of fifty years ago.



Home Grounds and Gardens

"I beseech you, forget not to informe yourselfe as diligently as maybe, in things that belong to gardening."
—John Evelyn, 17th Century.

October in the Vegetable Garden

THERE is very little fall planting to be done in the vegetable garden. The gardener who must plant something can find plenty of outlets for his surplus energy among the shrubbery and perennial flowers, as well as the bulbs. The experimentalist can afford to try fall planting of potatoes and garden peas. The main essential to success is a well drained piece of ground. In the hotbed and cold frame sow cabbage, cauliflower, corn salad, lettuce, radishes and spinach.

Chicory should be dug now for salad, and stored in the cellar.

"A stitch in time saves nine." Cut and burn the diseased plants and weeds and give the garden a house cleaning, and next spring the work will be cut in half.

October is a good month to set out rhubarb plants and to make an asparagus bed.

Lift some plants from the parsley bed and plant in a soapbox. If it is kept in a light, warm corner in the cellar, it will provide garnishing throughtout the winter.

Cut sweet corn and place in shocks. The ears will thus be protected from frost and continue to mature.

Earth up celery in sand to bleach it and make a crisp, tender stalk.

An Interesting Garden Bed

The many instances of imitation in the vegetable world are worthy of observation. An interesting garden bed could be made by planting only these strange varieties resembling other members of the vegetable kingdom, animal and marine products, and, in some cases, even manufactured articles.

Vegetables that imitate some sorts of fruit are quite common, the tomato and gourd families supplying numerous examples. Beside these the lemon cucumber, garden lemon and blackberry lily

all follow, more or less closely, the characteristics of the original fruits. The dozen varieties of tomatoes that belong to this class include peach, plum, cherry, pear, Burbank preserving, apple and currant. The majority of the types mentioned include both yellow and red sorts. Most of them grow in clusters of ten or more. They are all interesting and the edible kinds are useful both raw and cooked, as well as for pickling. Probably the more valuable of these are the peach and plum tomatoes. The dull peach-like surface of the former, as well as its color, size and shape, shows a remarkable similarity to the peach itself. The flavor is sweeter and the skin tenderer than in any other tomato. The yellow plum variety is frequently seen in grocery stores, but the red plum is more rare. These, like the cherry and pear tomatoes, are very productive.

Burbank preserving tomatoes belong to the small red type. The clusters sometimes resemble bunches of grapes. They have less acid than the common sorts. The currant tomato is for ornament only. The long vine, with slender stems and delicate foliage, covered with hundreds of small red "currants" in long "strings," is both decorative and curious.

Among the gourds and gooseberry, pear, lemon, apple and orange all possess some real or imagined likeness to the fruit after which they are named. The lemon cucumber is a still closer copy of its namesake. In size, color, shape and general appearance, both cut and uncut, it is very like a lemon. In addition to its value as a curiosity, this cucumber is an excellent table vegetable. The seed clusters of the "blackberry lily" so exactly resemble ripe blackberries that they would deceive both camera and beholder, if the habits of the plants were not known. This plant renews itself each year, cropping up in most unlikely places, even between the stones of the path, so persistent is it. The garden lemon, another of these so-called fruits, is a round, yellow, melon-like vegetable, with a more acid flavor than a muskmelon, but similar to that variety. It is used canned, pickled, preserved and in pies.



BLACKBERRY LILY (Seed Pods).



THE SEPTEMBER CORNFIELD.

Fall-Bearing Strawberries

I have already called attention to the wonderful coming true of the dream of an ever-bearing strawberry, an event which may well be called the most important recent development in the possibilities of home gardening. I saw vines loaded with green and ripe berries in a garden among the foothills of the White Mountains last September and I can readily believe that farther south one could pick ripe berries from such plants in October or November. Every owner of a garden should plan to set a few of the new varieties like Francis, Americus and Pan American, which are now offered by many of the nurseries.–Clarence Weed Munro.

The Decorative Mullein

It is well known to landscape gardeners that many American plants are grown in Europe for decorative purposes to a much greater extent than they are here. The fact that people are not so used to seeing them leads to a greater appreciation of the real beauty so many common plants possess. Everyone knows and probably most people hold in a sort of unrealized contempt the common mullein. Few people would be likely to consider it a plant of decorative value, yet one of the most striking features of a snug summer home seen in the White Mountain region last summer was a single mullein stalk standing in the lawn alone not far from the cottage. Its great woolly leaves at the base with the straight ribbed stalk, surmounted at the top with yellow blossoms and brown seed pods, made a picture that caught and held the attention. One who saw this plant was likely to carry away a keener appreciation of the possible decorative values of some of our commonly overlooked plants.

Good Places in Houses for Closets

By Mary H. Northend

NO one who knows the conveniences and comfort of many closets it seems strange that so many architects of the present day make little or no provision for them in their designs. Even more inexplicable perhaps is the way in which the inhabitants of these modern closetless, cupboardless houses manage to maintain even a semblance of tidiness.

There was some excuse for the lack of closets in many of the old-fashioned mansions of Colonial days. Built perfectly square and divided into four primly rectangular rooms and a long straight hall on each floor, there was little room left for cupboards of any description unless the space between the walls was utilized for this purpose. Modern builders cannot be so easily vindicated, however, since their departures from the uncompromising style of their predecessors have been accompanied by the introduction of jogs and alcoves eminently suited for closets, but too frequently allowed to remain merely wasted space.

Although cupboards are much more easily arranged when a house is being built than after it has been completed, it is possible fortunately to add many con-



CHINA CUPBOARD IN DINING ROOM.

venient little closets even in an old house. Odd corners and jogs may be admirably adapted to meet the needs of the housekeeper, and in many cases beauty, as well as practical utility, will be the result of judicious transformations along that line. The expense of making such alterations is seldom large and their value from the standpoint of convenience alone is as a rule far greater than their actual cost.



WALL CUPBOARDS IN WINDOW SHAPES.

Perhaps no type of built-in closets is more commonly found today than the china cupboard. Recommended by its ornamental character, as well as by its usefulness, this has come to be looked upon as a most desirable dining room feature and its popularity is constantly increasing. Even in old-fashioned houses built-in china closets are often to be found, although they usually differ quite noticeably in style from cupboards of more modern design.

Most of the old-time china cupboards were built across a corner of the room, thus taking up but little space and at the same time affording excellent place in which to display one's fine china and glass. The buffet pattern seems to have been a great favorite in those days and with good reason. Grace and convenience were well combined in this style of closet and its simple decoration and finish was always in harmony with its surroundings.

The modern reproduction of the old-fashioned buffet is a good example of what a china closet should be. The upper shelves, usually four in number, are protected from the dust by means of glass doors. These may be either plain or or-

namental, according to the owner's personal tastes, but the most attractive cupboards have tiny leaded panes. The lower part of the buffet is enclosed by wooden doors supplied with brass knobs, lock and sometimes ornamental hinges. Such a china closet is most effective when finished in white corresponding to the woodwork of the room and used in conjunction with mahogany furniture of an old Colonial style.

Wall cupboards are much more common, and appropriate for that matter, in dining rooms, where no particular period is followed in the furnishings. There are many different styles from which to select and often a distinctive type will be suggested by some unusual architectural feature of the roof itself. Then, too, the position which the closet is to occupy will frequently have an influence on its design. For instance, a jog in the wall may leave just sufficient space to insert a small cupboard, or certain lines in the shape of a window may be repeated in a set of china closets built in on either side. Superfluous decoration should be avoided, for it must be remembered that cupboards are primarily for use rather than ornamentation. Grace of outline is desirable, however, and the beauty of a simple, well designed china closet adds much to the attractiveness of any dining room.

Although somewhat less pleasing to the eye, kitchen cupboards are quite as necessary as the more ornamental china closets. It is in the kitchen that the busy housewife most appreciates convenience and here a set of cupboards built in the proper place may mean the saving of many steps. A most satisfactory arrangement was hit upon by one clever woman and its adoption would doubtless prove a blessing to many others.

On either side of her kitchen sink was built a broad shelf, underneath which was a drawer and a good-sized closet. A shelf was built in each closet, several inches from the top, and on these were kept kitchen soap, brass polish, stove blacking and similar articles. The space beneath the shelves was utilized for kettles and pans, while the two drawers above the closets were kept for dish towels and kitchen cutlery respectively.

Within easy reach above the sink was constructed another cupboard with double doors. In this were three long shelves, on which were arranged the smaller pieces of tinware and the cooking dishes. Everything had its place and it was an easy matter to put things in order when dish washing was over.

Unfortunately the sink is so situated in some kitchens as to make such arrangement as has just been described impossible. In such cases a good substitute may be contrived by building a large cupboard across one corner of the room or in any other place which may prove most convenient. This should be provided with glassed-in shelves for kitchen ware, while the lower portion may contain drawers for towels, soap, etc., or be made into a small closet and used for flour or kettles.

A laundry closet is also essential to the convenience of a home. If possible it should be large enough to contain the ironing board and clothes horse. In addition to this there should be sufficient room for either drawers or shelves at one side, where laundry supplies, such as soap, starch, bluing, clothespins, etc., can be kept.

Even a very small space is large enough for a broom closet and it is a convenience well worth having. The only equipment necessary for such a closet is a generous supply of hooks on which to hang the brooms, mops, dusters, brushes and dust pans which go to make up every woman's cleaning outfit.

Not even the living room of a house should be without closets, for there are always games and magazines to be



ORNAMENTAL GLASSED-IN CUPBOARD OVER MANTEL.

stowed away when not in use. Some rather unusual cupboards are occasionally introduced, as in the case of one home, where the man of the house contrived an ornamental glassed-in cupboard above the mantel in which to display his highly prized golf cups. Not content with a single example of his ingenuity he proceeded to cut into the partition beside the open fireplace and made a neat little closet for kindling wood.

Clothes closets hardly need to be mentioned as absolutely necessary in every well ordered home. It is the exception rather than the rule, however, that even a new house contains a cedar closet for storage purposes. The few home builders who have been wise enough to provide a closet of this sort have found them far more convenient than cedar chests, since the clothing may be simply hung up and left with the knowledge that no moth will ever touch them. In building a closet of this sort red cedar should be used for ceiling, floor and walls in order to make it absolutely moth proof. This is, of course, rather expensive, but the value of such a closet is correspondingly great and in the end the investment will be sure to prove well worth while.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

An Artist's Home in Massachusetts

By A. E. Marr

IN this day of high cost when about everything has taken prodigious jumps skyward, except perhaps salaries, the building proposition has not been backward in following suit. Nevertheless, it is possible today, notwithstanding high prices and architects' estimates, to really build and own a home, substantial and attractive, at a very low cost.

I am going to show by photographs and floor plan and state plainly just how it was accomplished.

The house is of frame construction and is covered with best quality shingles. Care was taken to preserve the large trees for a setting, and the house was carefully planted among them. The window treatment is both unique and attractive, small squares of glass being employed throughout the house. The entrance is simple, and has a low seat.

On entering the bungalow, one steps into the living room or studio. The artist owner designed this room principally for his work, and the entire front of house is devoted to it, it being about eighteen feet by thirty feet. The floor is rift North Carolina hard pine, and the standing finish is the same wood, stained walnut and rubbed down with wax to a satin finish. Windows occupy a goodly portion of the outer walls, and make the room extremely light and cheerful, while a large one at the north side gives an excellent light. The walls are plastered, being finished rough floated, and the ceiling has exposed rafters, with the spaces between them sheathed. Especial care was taken to have both rafters and cross beams of extra heavy stock, and this one item alone gives an air of strength and solidness to the interior. Nor is this merely an effect, for this treatment is but an indication of substantial construction. All beams and exposed ceiling woodwork were tinted a soft smoke color, to tone down the raw wood, as well as to give an idea of age.

Perhaps the most striking feature in this room, aside from its general harmony, is the six-foot fireplace. A liberal hand was used in its construction, and this one feature gives an air of comfortable homeness, and invites the visitor to

linger and rest in front of its cheerful blaze.

The gallery is an interesting feature, since it shows the utilization, in an especially attractive manner, of what would otherwise have been lost space. It is about ten feet by eighteen feet and serves as a most convenient extra chamber.

Small squares of glass were employed here, following the general scheme of windows throughout house. Simplicity was the keynote, and the furnishings denote that fact plainly. Antique furniture was used with good effect. This room also bears indications of the owner's personal interest, as evidenced in the heavy



VIEW OF THE HOUSE TAKEN FROM THE SIDE AND REAR.

The dining room, leading from the living room, is eleven feet six inches by fourteen feet, and has floors and standing finish the same as the living room, except that the woodwork was stained a slightly darker color. The walls are covered with a two-tone yellow covering and the ceiling is tinted to blend. A large bay affords sufficient light, a fireplace cozy cheerfulness. The built-in buffet was carefully handled and its simple plainness is very pleasing.

hanging light in center of room, the owner having planned and made it from heavy chain and hammered copper.

Beyond the dining room is the chamber, a room about twelve feet by fifteen feet six inches, with floor and standing finish of same wood as the preceding rooms, except that the wood trimmings were finished with white enamel. The walls are papered with gray-blue grasscloth and the ceiling has been tinted just enough to harmonize.



THE LIVING-ROOM.

The service portion of the house contains the kitchen, a room ten feet by eleven feet, the usual pantry and cupboard spaces, and also a shed or storage



THE DINING-ROOM.

room some nine feet by ten feet in size. This latter room is an excelelnt feature in a house of this small size, since it serves admirably for the storing of the numberless little things which collect.

A noteworthy feature connected with this room is the ventilation scheme. Slatted and screened openings were finished in the walls near the eaves, while glass serves to exclude cold in the winter. The floors and wood finish in the service portion are hard pine, while the walls in the kitchen are painted a yellow tint, oil paint being used in order that the walls might be easily washed and kept clean.

The ceiling had the same treatment of oil finish, except in white, and much stress should be laid on this feature of oil painting. Every housewife will readily appreciate the ease with which the maximum of cleanliness can be observed with a minimum exertion of labor.

The structure represents what may be accomplished at a very small cost by one using judgment and good taste, at a cost that by many would be considered impossibly low, nor should the prospective builder allow discouraging estimates to deter him. This article proves conclusively what really can be done and represents actual facts.



The Cost

General carpenter work	$1,373.00
Plumbing	250.00
Painting	50.00
Papering	12.00
Electric wiring	50.00
Screens	15.00
Furnace	200.00
Carpentering and brick work installing furnace	100.00
Digging cellar and stoning up	50.00
	$2,100.00
Architect's commission (10%)	210.00
Total cost	$2,310.00

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 371 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 372 E. B. RUST, Los Angeles, Cal.
B 373 ARTHUR C. CLAUSEN, Minneapolis, Minn.
Design No.
B 374 WILLARD C. NORTHRUP, Winston-Salem, N. C.
B 375 Courtesy of the UNIVERSAL PORTLAND CEMENT
B 376 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 377 JOHN HENRY NEWSON, Cleveland, Ohio.

Design B 371

The size of our bungalow design is 41 feet 6 inches breadth and 24 feet depth, it is designed in the half timber and cement style that is very appropriate for a one-story bungalow. The height of outside studs is 10 feet with double sills and plates. The first floor is set up 2 feet above the grade, thus keeping the low appearance so much desired. There is good space on the second floor for finishing a good room or two and leave good storage space. The estimated cost, exclusive of heating and plumbing is placed at $2,500, this figure does not include any finishing on second floor.

The plan calls for a good sized living room, dining room and kitchen and two bed rooms with a convenient bath room.

At the left hand corner is a wide liberal entrance piazza, this can be screened in if desired and also glazed in during the winter months, making a fine sun parlor.

The exterior cement may be stained with a waterproof wash green, brown or light buff and the roof shingles stained red, brown, or green to suit.

Washington fir may be used for finish and also for floors stained brown. The mantel will look well laid up in rough sewer or vitrified brick. The walls to be rough plaster and tinted. The wood work to be very simple, doors made low and on line with the windows.

Design B 372

"Multum in parvo" may be well applied to this design, containing as it does a good arrangement of all needful living rooms with many conveniences on one floor in a ground space of 30 feet by 37 feet exclusive of porches. The combination of brick with shingle is nearly always successful, and in this case makes a pleasing exterior. The foundation is of concrete and the house is set low and close to the ground as a bungalow should be. The porch floor is cement. The interior floors are of oak, stained and waxed, the remaining finish is of pine stained and varnished, except in kitchen and bathroom where it is enameled. There is a paneled wood wainscot in living and dining room and built in buffet and and fireplace. The estimated cost exclusive of heating plant is $2,000.

Design B 373

To bring a substantial and dignified exterior such as the design above shown, with a floor plan covering 40 feet by 25 feet exclusive of porches, into a cost price under $5,000 is something of an achievement.

The interior comprises a large living room the entire depth of the house, well lighted and with ample fireplace. On the other side of the center hall are arranged the dining room, kitchen and service quarters. The second floor possesses a magnificent family bedroom, with three other chambers beside. The exterior is of very rough coat pebble dash cement with shingle roof. The openings are well balanced and the porch massive. The flower boxes beneath front windows give relief to the severity of the design. The approximate cost of this house is placed at $4,400.



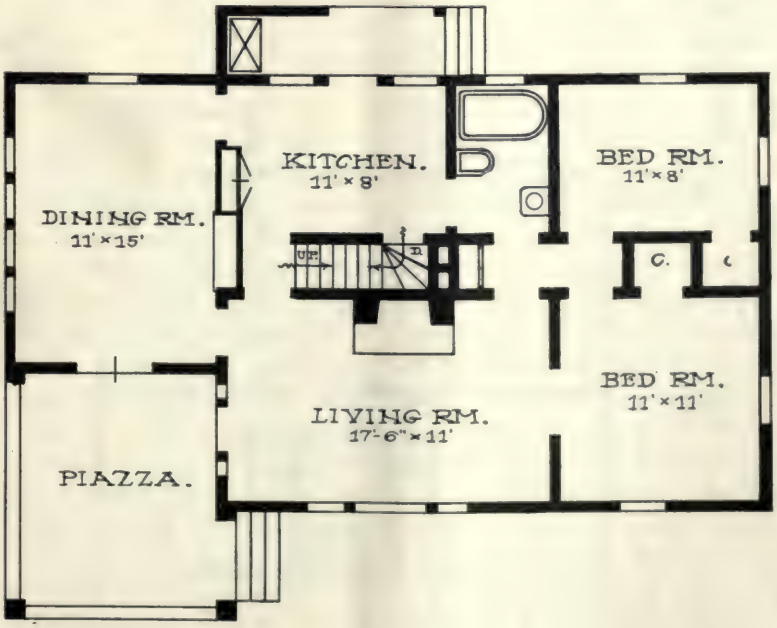
Chas. S. Sedgwick, Architect.

Design B 371

Half-Timber and Cement Bungalow

Design B 374

A shingle house in semi-colonial design. The squared columns made decorative by sunk panels on their faces. The front door is generous, having the colonial fan-top with side lights, and the shutters add to the colonial feeling. Otherwise this a modern house with well planned interior.



The ground space occupied is 28 feet by 32 feet including porches. The reception hall has an ample fireplace. The same chimney permitting a smaller fireplace in the little parlor or den on the right. This room opens through sliding doors in to the dining room with large swelling bay, occupying one entire end of the room. A fireplace also is provided here, this house being built in the south, but could be omitted if desired. A toilet and butler pantry with passage between are provided on first floor. On the second floor four bedrooms are provided, three of them equipped with fireplaces, with bath conveniently reached from all. The front chamber is projected out over the porch to gain increased space.

The combination of much white trim with brown stained shingles gives the exterior a cheerful aspect. Approximate cost of this house, including basement and plumbing, is $5,500.

Design B 375

This house is an exact reproduction of the prize model shown at the International Congress for prevention of tuberculosis. The entire building, walls, floors, partitions and roof are of the poured concrete with an insulating board bedded in the center of the walls to form a continuous dead air-space. The door and window casings are of metal and all room corners and angles are curved. There is no interior plastering, the cement being left just as it is freed from the forms and brushed with a tint. The floors are smooth cement, the bathroom floor sloping to a central drain over which the shower is placed. The entire roof is utilized as open air sleeping rooms, with the central solarium as shown on the floor plain, used for a sewing and sitting room. The walls are broken by many casement windows, most of these equipped with awnings, and with its white walls and red cornice and flower boxes presents a striking appearance. The first floor consists of a reception hall with circular staircase also of cement. Kitchen and large living room 28 feet long, one end being used as dining room. Central between is a large, hooded fireplace. The arrangement for garbage, ice and coal are compact and closely planned. The cost of the house was about the same as for frame construction of equal space.

Design B 376

This design has created a great deal of favorable comment where erected. The foundation and porch piers are of cobble stone, walls of cement plaster and the exterior in every way produces an artistic and refined effect. The interior plan is also very attractive. The magnificent stretch clear across front of house, including central hall; the reception hall on right and living room on left of same and the columned archway connecting dining room with living room, make an interior that is unusually attractive.

There is a full basement under the entire house and hot water heater provided. The finish of the principal rooms of first floor is oak or birch; balance of house, pine, poplar or cypress, painted or stained.

Cost, $6,800; width, 46 feet; depth, 28 feet 6 inches; height of basement, 7 feet; first story, 9 feet 5 inches; second story, 8 feet 3 inches; second story rooms full height.

Design B 377

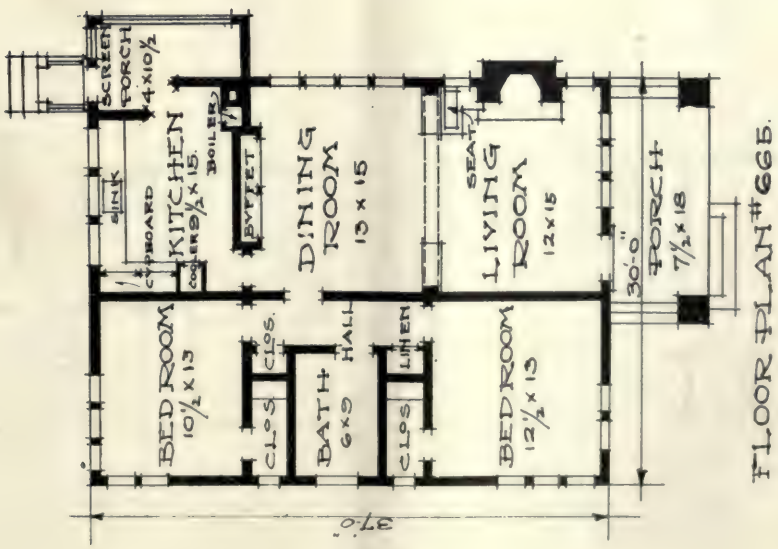
This design occupies a ground width of but 22 feet, with space for the usual living rooms. The vestibule opens into a small hall from which recessed stairs ascend and a kitchen pantry is contrived under their rear. The kitchen conveniences are well arranged. On the second floor three bedrooms and a bath are provided, the bedroom being planned with reference to space for the bed, a matter often overlooked by designers. The exterior is of rough-sawn lap siding with shingled roof. The projection of the middle chamber makes a pleasing break in the lines. The foundation is of brick and a pent-roof shelters the porch. Estimated cost, $2,500.



E. B. Rust, Architect.

Design B 372

A Brick and Shingle Bungalow





Arthur C. Clausen, Architect.

Design B 373

A Well Balanced Cement House





Willard C. Northrup, Architect.

Design B 374

A Shingle House Built in North Carolina







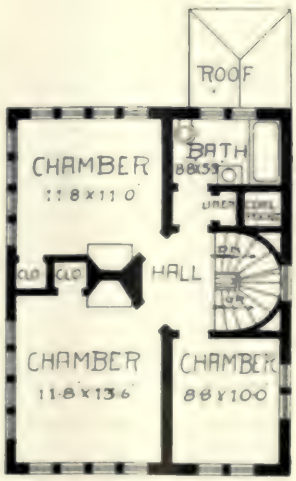
Courtesy Universal Portland Cement.

Design B 375

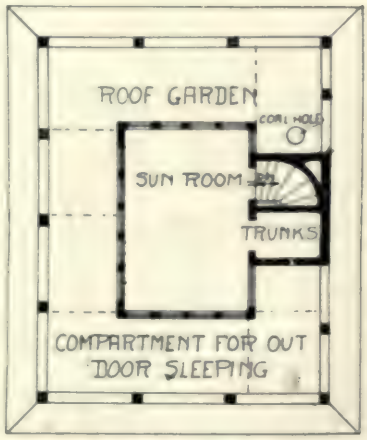
A Unique House of Poured Cement in Virginia Highlands



FIRST FLOOR



SECOND FLOOR

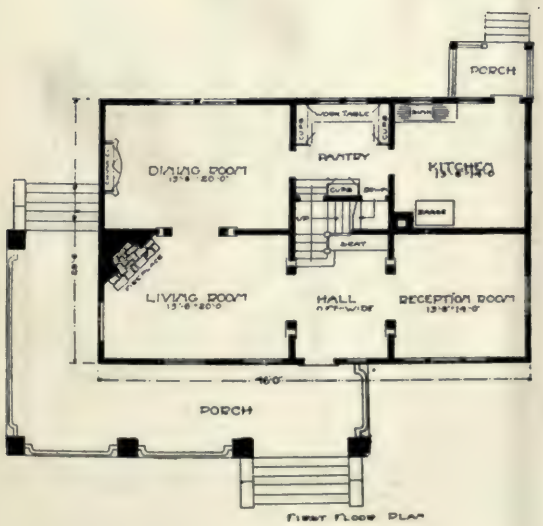


ROOF GARDEN

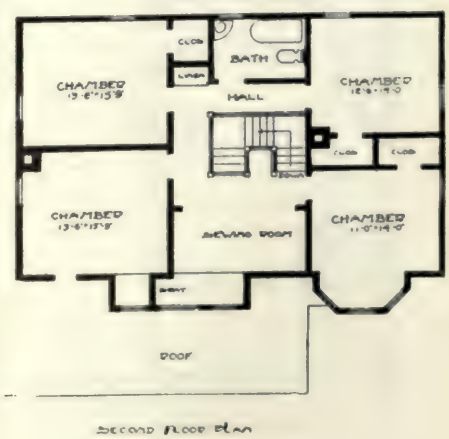


Design B 376

On the Popular Long Horizontal Lines



First Floor Plan



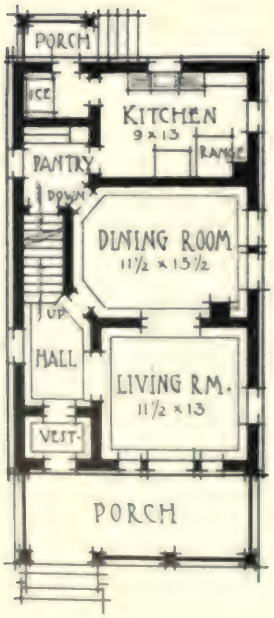
Second Floor Plan

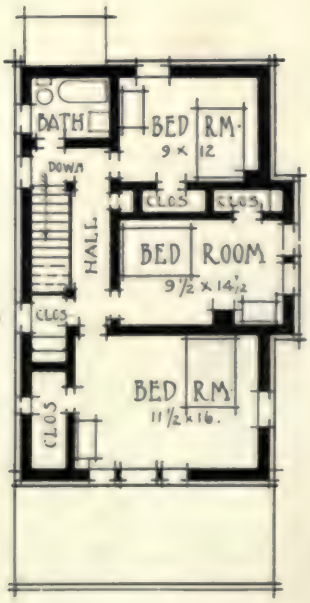


John Henry Newson, Architect.

Design B 377

A Frame House for a Narrow Lot





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Silver Gray.

ONE of the most beautiful of recent wood finishes is the silver gray stain which is applied to oak, although the strong and much raised grain of many pieces suggests the use of ash. It has the slightest possible tinge of green and is often associated with panels of canework in greenish gray. It is very effective with some of the upholstery fabrics which combine pink and gray, and is recommended for use with lavender flowered fabrics, preferably in the pink tones.

Appliqué Curtains.

Rather effective sill length curtains seem to have been suggested by the popular cut-out effects in wall paper. They are made of one or other of the sun-fast materials, often alluded to in these pages, and are finished with a hem or a narrow, lace-like gimp. A deep border across the bottom is arranged from floral forms cut from cretonne, fastened down with a buttonhole or a chain stitch. The effect is best when the design is strictly conventional, and the border should be about a foot in width.

A Use for a Short Sofa.

The short, armless sofas, just long enough for two people, which were common some forty years ago, are a pretty addition to a bedroom, when placed across the foot of a wooden single bedstead, and upholstered to match the other furnishings. They also look well standing across the draped back of an upright piano.

Striped materials look well on these little sofas, such as the light colored jute fabrics, which are not likely to come to hard usage when thus used.

Oriental Willow and Lacquer.

Allusion has often been made in these pages to the interest and distinction of the Chinese willow furniture. The hourglas chairs ($5) are good looking and comfortable, and there are delightful wide armed lounging chairs with square or round backs. The most picturesque thing to be had in Oriental willow is the deck chair, with wide arms and an extension for the feet, costing $12.50. A careful comparison of prices will easily prove that one gets much more for his money than with domestic wicker of equal pretensions.

Japanese lacquered trays and boxes seem to have lost a good deal of their popularity, but there are many charming things to be had, invaluable when a bit of strong color is needed. Such is a twenty-four inch circular tray, in vivid scarlet lacquer, with an elaborate design in gold, a magnificent foil for a room in cool blues and grays, and there are smaller sizes. Other good bits are trays of carved wood, all in one piece and lacquered in red and black. These latter are more durable than trays whose sides and bottoms are glued together, as they cannot come apart.

White Maple or White Enamel.

In using either the idea is to obtain a delicate effect and both are peculiarly suitable for summer house furnishings. Either harmonizes well with cretonne furnishings, and the difference in expense between really good white enamel furniture and maple is not appreciable, while the variety of pattern is much greater in the latter. Maple has the substantial advantage of being hard wood showing its natural surface, and requiring to renewal,



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while enamel at its best is hardwood painted, and must infallibly wear off, involving a more or less expensive process to put it into good condition. It is worth while considering this point before deciding upon enameled furniture.

Both maple and enamel need a wall of solid color and reasonable depth of tone, but of the two the maple looks much better in a room of no special color, where the wall paper is negative. On the other hand, white enamel is the better choice for floral papers with a white ground and a good deal of pattern. And it is the only possible choice for most blue schemes.

Maple is worth considering on another ground. It is almost the exact tone of the natural wicker furniture. A bed and bureau of maple, chairs and a table of natural wicker, a green or rose wall, a self toned rug and a flowered cretonne and you have a charming bedroom scheme.

Toning Down.

I heard of someone who covered a number of couch pillows with flowered silk and found the effect unpleasantly bright, while the silk soiled very easily. So she gave each pillow an additional cover of pale gray dress net, to her great satisfaction, also to the mystification of some of her friends who could not find that particular tone of flowered silk in the shops.

The same principle is applied in the net covered cretonne pillows shown everywhere this summer. But very few of them are successful for the reason that the cretonne used has not enough character to be effective when toned down.

And here is a suggestion for the net bedspread, which is so often a disappointment when used over a lining of plain color. Use a white or cream colored lining, and in most cases the cream color is the best choice. Then ornament this lining with a square made of strips of the cretonne used in the room, about five inches wide and mitered at the corners, arranging it so that a margin of about the same width is left between it and the edge of the bed, and lay the net spread over it.

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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

Coloring Cement.

H. L. N.: "We have a bungalow of two bedrooms on first floor and three on second floor. Would like to finish the walls of halls and all rooms on second floor, so as not to have them papered the first year. I thought of using Ochre in the plastering to stain the walls a soft buff. This plastering to be put on smooth so walls can be papered in the future. Can you give me a formula on what quantity of ochre to use in plastering, say for room 14x14, also can you stain cement for porch and pantry floors.

What color for wall paper would you suggest for dining room gray and white, 24x16 with south and west exposure, instead of green and gray, as I have used both.

I am changing the hardware on bedroom furniture and bookcase, shall I have glass knobs or brass?"

Ans.—This correspondent enclosed postage for reply by mail, but failed to give address. We are therefore replying through columns of our Decorative Department.

In regard to tinting of plaster in bulk for interior walls, it is seldom successful, being in the majority of cases patchy, and uneven and off shade. It is very difficult to make a good even tone by incorporating color with the wet plaster. Should you desire, however, to try the experiment, the proper buff tint may be obtained by using French ochre in the proportion of from four to ten pounds of the ochre to one hundred of plaster, according to the depth of color desired.

The cement for porch and pantry floors could be colored green by the use of Crominus Oxide, in proportions of 5 to 8 per cent of the weight of the cement. Or you can get a red color by the use of red oxide of iron in the same proportions. Or you can use one of the waterproof cement stains, of which there are now several excellent ones manufactured.

In regard to paper for southwest living room, we should certainly use one of the cool colors. Both green and gray are now so artistically blended and shaded that a positive tone of either is not necessary. We can suggest nothing so good as a paper in blended tones of either green and gray or blue and gray.

If the bedroom furniture is mahogany, then glass knobs would be the preferred choice; if Circassian, walnut or oak then we should use brushed brass.

An Ohio Farm House.

R. F. H.—"Am enclosing plans of house. The house is to be built on a farm and I hope to plant plenty of shrubs, trees, etc., around the premises. What tint would you suggest for the exterior?

"I expect to shingle the lower story and stucco the second. Roof to be of shingles.

"Am thinking of using best grade cypress shingles.

"Porch, wall, rail and columns to be of field stone or 'hard heads.' Floors of cement.

"Haven't definitely made up my mind whether to finish the second floor in pine or to spend a little extra and make it brick or cypress. What is your opinion of wall boards instead of plaster? If it is satisfactory I should like to use it on account of the expense saved as well as for the reason that it would permit me to occupy the house sooner."

Ans.—Your plans show a compact and well arranged house and your own ideas of general treatment seem to us good and well considered.

In regard to exterior color scheme: Since many shrubs and vines are to sur-

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round the house, we would suggest simply oiling the cypress shingle of side walls with a green roof stain and the gray stucco of upper story, the background for the shrubs and vines would be pleasing. If preferred, a light brown stain could be used on wall shingle. With the cement floors and grey boulders we would paint the trim green.

In regard to substitution of wall board for plastering, we think in your climate it can be safely done. The important thing would be to make sure of a warm, tight wall. We should think this could be done by the use of interlining as flaxlinum. We should hesitate to use wall paper on the wall board, and think your safest course would be to tint. The paneled effects are very attractive.

We should advise pine painted white for the second floor. Though cypress stained might be used in the stairway and family room. In the kitchen woodwork is best either painted or varnished natural. The oak floors can be stained or not as you prefer. The stain makes them prettier, but wears off before doors, etc. They can be finished either with wax or one of the good floor varnishes, such as Mar-not or Liquid Granite. There is not much choice between these finishes. Birch or maple floors can be either waxed or varnished. We should prefer brick for fireplace facings.

Flemish Oak for Livingroom.

J. L. O.—"My livingroom will be 34 by 17 and across the front of the house. I intend to have flemish oak panels and woodwork with brown tinted walls and ivory ceiling and furniture flemish oak. Would my diningroom look well if I had white panels and plate rail with delft blue between and mahogany furniture or would the diningroom finished in green with mahogany furniture look better with the flemish livingroom?

"Between is a small hall that I thought I would finish in white and mahogany.

"Living- and diningroom will be rough plaster."

Ans.—Touching the diningroom finish—since the room does not directly open from the livingroom, it can be treated with the white paneled woodwork, mahogany doors, mahogany furniture, and can be furnished in deep rich blue, but not delft blue, rug and hangings. The wall can be rough plaster tinted ivory, or a decoration in blue and greens on an ivory ground, above the plate rail. The hall between will be correct as you suggest. We think you will be better pleased with a fumed oak finish and furniture in livingroom rather than anything so dark and heavy as flemish. The ecru tinted walls and ivory ceiling would be excellent with such a finish.

Wall Board for Remodeling.

W. W. H.—"I am remodeling a cottage. I wish to remove the inner wall on west side and throw hall and room together, making a large livingroom. This room has two closets on each side of chimney. I want to build in bookcases here, and put casement windows across front on south side of room to give light. There is only one window in this space now. Then build stairway on east side of hall and finish rooms in attic. This house is ceiled throughout with wide plank about 9 inches wide and painted. I'm anxious to know how I can fix these walls without papering, and as little expense as possible. I have some rooms papered and they crack and are so unsatisfactory. We have no paper hangers here that really understand the hanging. I thought of tacking laths on the ceiling and plastering, but saw wall boards advertised in your magazine and thought they might be cheaper. Which would you prefer?"

Ans.—Your plan for remodeling cottage is very good. We would suggest starting the stair back of the middle of the hall with a landing and turn half way up, as only a narrow passageway would be left with a straight run of stair the length of the hall. This will leave a fine open space in front to open into the livingroom. Make a row of five casement windows across the front. Why not make a sun parlor out of the small room beside porch, with glass doors opening on porch. The closet spaces will make excellent bookcases. Do not run shelves way up, but let the top shelf about 6 feet up be broader than the others and a place for flowers or bric-a-brac.

We think wall board would solve the



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problem of the walls admirably for you. The December, 1911, KEITH'S MAGAZINE would give you information on the use of it. It offers a good surface for either alabastine tint or paint.

We feel that all white walls and woodwork would be rather glaring in your climate, especially with the increased light from the new windows. We would use a soft grey tint in livingroom and hall, with green rugs, draperies and furnishings.

C. A. J.—We have bought a new house in a new town. Will you kindly help me to make it inhabitable. The woodwork and floor have been stained a dark oak, but floors are in a bad condition. I would like kitchen, bath and pantry in white and blue, woodwork white. Will use linoleum on floors. I have a good green rug and light one, would rather use in bed rooms if possible. Also have brass beds and oak furniture for bedrooms. How shall I do the walls? We would have to use paper and buy of a small local dealer. I would like one bed room in blue and one in yellow. I will buy rug for the other room. My dining room and library, or living room, furniture are in weathered oak. I would like to make one of the front rooms into a parlor and have it pretty, but what furniture and rug shall I buy for same, since the dining room and other room would be mission and all through the halls have wide openings. Hall is wainscoated four feet. Can I use some cloth to cover same, paper above. I want portieres between bed room and southwest room. Other rooms I had rather not have hangings. Would you suggest some column effect, as openings are plain and 6 ft. wide. The mantle is same as woodwork with light buff brick.

Ans.—We should not advise doing the woodwork over, inasmuch as all your furniture, including bed room, is in the oak. But try to avoid a dark and dingy effect by the selection of wall papers. This will probably be a difficult matter if they must be got from a small local dealer, as his stock will consist of "Oatmeals" and impossible flowered and figured designs. The freight on the paper for your walls would cost but a trifle, not over a couple of dollars, not worth considering as against the selection, and no doubt be more than offset by the higher prices of the local dealer. Do not try to "cover over" the hall wainscoating, that is not a bad feature; but the wall above it should have a very light pale tan, in such a long, dark, narrow hall, with cream ceiling. In general we do not advocate drop ceilings, but in the case of such small, square rooms with 10 ft. walls to drop the ceilings to the tops of the windows, will take off some of the boxy effect, as well as lighten the rooms, for the ceilings should be very light tones.

In regard to columned openings, such an effect as shown in cut would be very good between library and hall, but we would not advise it in the other openings. The built-in shelves could be lowered to the blue line, but not more. By all means avoid a columned opening between dining room and library, as there are always times when it is desirable to shut off the dining room, either with double doors or hangings.

You could have a pretty room even with the dark woodwork by doing the wall in a soft gray paper in a small tapestry figure, using one or two pieces of furniture in Circassian walnut, which is a very light grayish brown, and some gray wicker furniture upholstered in a rich blue, with a rug of plain deep blue Saxony. You would then have a beautiful room, yet in harmony with the rest of the house. Such a rug could be bought for you in 8-3 by 10-6 for $45.00, or a plain Wilton velvet in that size for $30.00. The bed room back of it could be done with a blue wall using your light rug, and the green rug in the other room with a yellow wall, using a scheme of green and yellow.

In the parlor there should be deep blue portieres, well pushed back, but you want the color note and the softening effect of the drapery. The library and dining room should have a color scheme of greens and browns, light golden brown in the dining room. The parlor could have curtains of filet lace net, the living and dining room pale ecru scrim, very sheer, with a little finishing edge. The white shades will do, though cream would be better. The mantel and brick facings are very good.



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October Pickling and Preserving.

SMALL cucumber pickles must of course be made in August or September, but the bulk of the pickling may very well be left until the cool days of October, when the materials are just as available as earlier.

One particularly good sort of pickle is a close imitation of Crosse and Blackwell's chow chow, a delicious and expensive English pickle. Small onions, cauliflower, string beans and green tomatoes are the materials needed, and the dressing is made of vinegar thickened with mustard. The seasonings are black and white mustard seed and turmeric, and it approximates closest to the original when it is given a dash of garlic.

If you look at the output of the best pickle factories you will observe that no dark colored spices are used. The chow chow is yellow with mustard only, chopped pickles are green, catsup has the bright red of the ripe tomatoes of which it is made. Save the spices for fruit cake and plum pudding, or for spiced fruit, and depend for flavoring upon onions, peppers and garlic. Your product will look better and be more digestible.

October is the time to do up grapes in large quantities. Grapes are rich in iron and in sugar, and are a valuable article of food. Making grape juice is a very simple matter and the cost is only a fraction of that of the manufactured article. Unless one has one's own vines, the small fox grapes have a better flavor than most of the cultivated varieties. The Catawba grape is available in quantities in some parts of the country, and is beautiful in color and delicious in flavor. The green or partially ripened grapes left late on the vines are the basis of an excellent acid jelly to be eaten with meat.

Most preserved pears are insipid, but the pear is admirable for taking the flavor of other things. Coarse fleshed, rather fibrous pears cooked for hours with their weight in sugar and a large quantity of green ginger are hardly to be distinguished in either color or taste from Canton ginger. And two-thirds pear and one-third quince gives a preserve quite equal to that made entirely of quince, at much less expense.

The Household Dye Pot.

There are people who are successful in dyeing on a large scale. They are the people who write the testimonials about the pale blue cashmere which, plunged into the dye bath without ripping emerged a rich red or a royal blue. It is perhaps cynical to inquire if the silk or cotton with which it was stitched took on an equally deep tinge, or if there were not various folds and puckers in which the original color was quite apparent. Be that as it may, such triumphs are not for all of us, and if it seems desirable to dye a really good material, it pays to rip it, to the last stitch and send it to a French dyer of established reputation.

But the prepared dyes are invaluable for a good many things, and are easily managed. It is worth while to accumulate a lot of skirt braids ripped from colored gowns, and to give them a bath of black dye. Silk braids seldom take a good black, but can be dyed another color, or if faded restored to their original brightness. The cotton trimming braids used on children's clothes color well, and so often do the clothes themselves.



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The dyes are especially valuable in renovating various furnishings. Mercerized fabrics, which generally fade badly, can be successfully dipped. Furniture gimps are good subjects, but having a cotton foundation, must be dyed twice, once with cotton dye, once with silk. The domestic linen taffeta has been successfully dyed olive, and as the fabric is practically indestructible, the process pays. Another fabric which dyes well is the figured petit point tapestry, which is all cotton. It goes without saying that the surface of a figured material will not be entirely plain, there will be a slight variation in tint, but this is not disagreeable. It is well to discharge as much of the color as possible, by boiling the goods in strong soap suds, and the color chosen should be darker than any of the tones of the fabric.

Economy of Time and Energy.

People who are responsible for the running of machinery make a study of economy of motion, saving time and increasing efficiency, and this is part of the business of housekeeping. The large kitchen is out of date. The ideal is the kitchenette with range, sink and table within arm's reach from a central point. It is worth while experimenting with the ordinary household processes so as to perform them with as few motions as possible. Keep platters, vegetable dishes, plates which must be heated, in the kitchen. Have the butler's pantry so located that it is a passage way from the kitchen to the dining room. A wheeled table for removing dishes from the dining room to the kitchen saves many steps.

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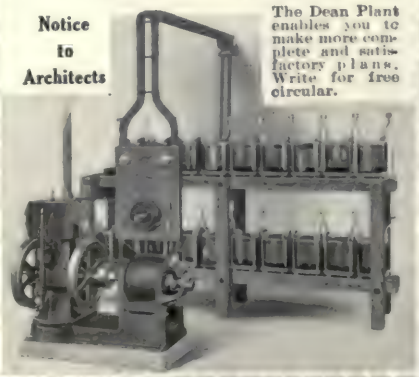
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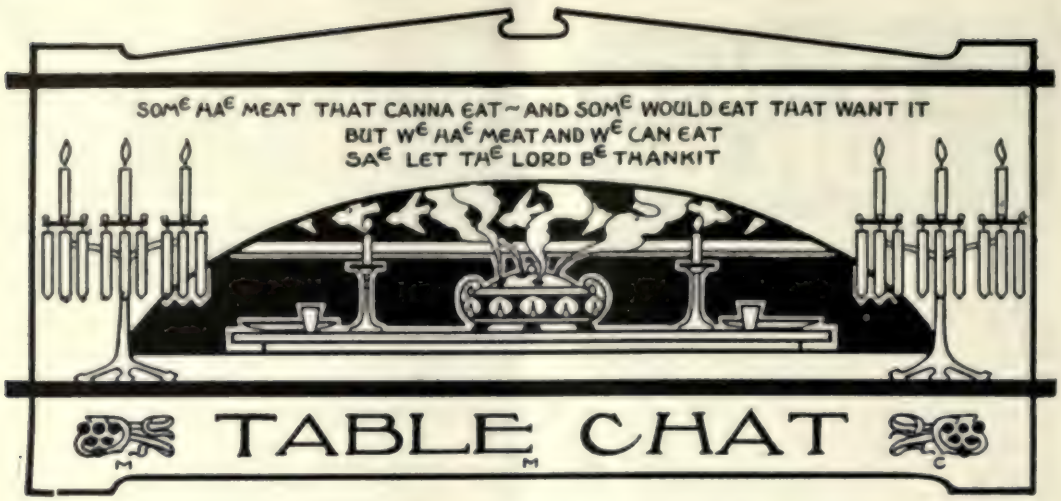
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Preserving and Canning

By Beatrice d'Emo

IT is the season when the wise housewife takes thought for her winter table. False economy is never more foolish than when practised in putting up fruits and vegetables for winter use.. Well made preserves and canned delicacies of home manufacture are so delicious that it is only the housewife who is sadly wanting in judgment and foresight who will run the risk of having her work go to naught by skimping in the sugar, in the purchasing of over-ripe fruit, or by over or under cooking her ingredients. The hit-and-miss cook who never measures or times her cooking is seldom successful in making preserves, however often she may be able to turn out savory dishes for immediate consumption.

Earthenware, porcelain-lined ware or granite ware should be used for cooking preserves, canned articles or pickles—never iron, tin or copper, which are apt to be affected by the acids of the fruit or vegetables. Whatever is used in preserving and canning in the way of utensils must be sterilized by being dipped in boiling water before using, and cleansed by washing in boiling water after using; and the least bit of neglected foreign substance is almost certain to cause mold and fermentation in the preserves.

Fruit for preserving should be perfectly ripe, even to the point of softness, but for canning should be a little green, Granulated sugar should be used unless other kind is specified. Vegetables for canning should be as fresh picked as possible, for wilted stuff will be tasteless and watery.

A gas or oil stove is the handiest to use while preserving, but should be fitted with iron lids so that the intense heat will not directly affect the bottom of the cooking utensil, for which reason the range or iron cooking stove is really the best, although it heats up the kitchen to an uncomfortable degree. Asbestos lids, with a wire network on one side, will also be found useful to regulate the heat, and an iron trivet will still further remove the simmering sweetness from the danger point.

Do not attempt to put up too large a quantity of preserves, etc., at one time. It will mean great fatigue and overheating to the cook, whereas if a dozen jars of one kind be made in a day, then another batch a day or two later, the extra work will be scarcely noticed. Also buy fruit or vegetables in small lots, so that either can be picked over and cooked the same day it is delivered. Cook fruit thoroughly before adding the sugar, then there will not be so much wasted by being skimmed off.



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Remove the skin from peaches or tomatoes by dipping them in boiling water, using a perforated dipper.

For berries, cherries, currants or plums, use two cupfuls of sugar to a cupful of water. For pears and peaches, a cupful of sugar to two of water, this being also correct proportions for grapes. The sugar and water should be simmered after the egg is added until no more scum arises, and the amounts given are to be used with one quart of fruit either whole or cut up if pears or peaches. The small fruits, if of the soft kind like berries and currants, should be cooked in the jar, but peaches, cherries, pears, quinces, crab apples and apricots should be cooked for five minutes in the syrup before being put in the jars. The method is as follows: Pick over the small fruit, but do not wash unless sandy, when rinse with ice water and stand in a sieve until drained dry. Remove stones from cherries and plums. Stand the jar on a folded cloth or a rack placed in a well-scoured wash boiler, if a steam cooker of proper size is not on hand, and fill as full as possible with the raw fruit, gently shaking them in place. Pour cold water into the boiler until it partially covers the jars—about half way up will do—then cover the boiler, set on stove and bring water to the boiling point, preparing at the same time the syrup as before directed. When the water around the jars is boiling hot have the syrup boiling hot also and pour into the jar. Put on the tops, but do not screw down tightly, and continue boiling for five minutes. Cut off heat or remove boiler from the stove, take off jar lids, and if the jars are not full to overflowing pour in more boiling hot syrup or boiling water, then screw on the tops as tightly as possible, having previously dipped the rubber rings —if these are used—in boiling water and adjusted them. As soon as the tops are in place, if the rubber rings have not been used, seal with paraffin. The tops should be kept in boiling water until it is time to screw them in place, and the jars should be rinsed with boiling water before they are stood in the boiler.



A Long-Handled Dipper Saves Many a Burn.

Plums require the same amount of sugar as berries, but for peaches a pound of sugar is used with two pounds of fruit weighed after it has been peeled and cut in quarters. The fruit is put in the sugar as soon as the latter has been dissolved with a few tablespoonfuls of water—about two to a pound—and simmered until clear and the syrup thick, then put up as the berries. Sour cherries and currants require about a cupful more than a pound of sugar to every quart of fruit. Cherries should not be cooked very long, as it will spoil the color of the fruit, therefore the sugar should be boiled with a few tablespoonfuls of water for fifteen minutes before the cherries are put in it, then the fruit boiled in the syrup for five minutes, at the end of which time they should be carefully skimmed out, the syrup boiled until it is thick, then the cherries returned to it until thoroughly hot, when they can be put in jars and finished in the usual way. Quinces must be simmered, after being pared and cored, until tender. They should then be skimmed out, the cores and parings added to the water in which they were cooked and simmered for an hour, then this water strained, a pound of sugar allowed for every pint of it, and boiled until the syrup begins to thicken, when return the quinces to it and cook until clear. Crab apples are prepared in similar fashion, but

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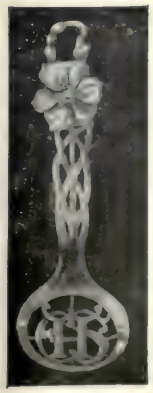


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should not be pared or cored, merely simmered until soft enough to be pierced with a fork, then the water in which they were boiled strained and the rest of the process the same as for the quinces.

Apples, currants and plums jelly easily, but raspberries, strawberries, cherries, and sometimes blackberries, require apple juice to be mixed with their juice before the latter will jelly successfully. About a third as much apple juice as fruit juice is the correct proportion. For apple or quince jelly cut up the fruit, but do not pare nor core, then put in the kettle and cook till tender. Pass first through a wire sieve, then pour in the jelly bag, and let drip without squeezing. Measure and to every pint of juice allow a pound of sugar. Mix and simmer for twenty minutes, then pour in tumblers which have been sterilized and stood in hot water while being filled to keep from cracking. When cold, cover as for preserves. The skins and pulp left in the jelly bag may be mixed with a little water and strained again, as much as possible being squeezed through the bag this time, then sugar, allowing a pint for a pound, and the cooking continued until jellying commences. This will give a cloudy, but good jelly for layer cakes. The apple juice for mixing with other fruit juices should be strained but not cooked with sugar. It can be prepared as wanted, for apples are obtainable at any time, but the juice being unsweetened will not keep for over a day or two. Red currant, black currant, blackberry or grape jelly may be made by filling an earthenware crock with the picked and washed fruit, then placing the crock and contents in a vessel of boiling water and cooking until the fruit is soft enough to be easily mashed. Crush with a wooden potato masher, strain through the jelly bag, add a pound of sugar to every pint of juice and boil for ten minutes, skimming off the scum as long as it rises. Some economical cooks advise boiling the juice before adding the sugar, skimming it well during the process, then boiling without skimming after the sugar goes in. While this produces good jelly, and saves the material, the same clearness will not be obtained as if the skimming was done after the juice and sugar were combined.

When making jelly do not prepare more than three pints at each boiling so as to assure clearness.

Concord grapes cooked skins and all, as above described, will make a rich deep reddish-purple jelly. Catawba grapes prepared in similar fashion make a delicate champagne colored jelly of delightful fragrance as well as taste; why it is not oftener made is singular. Niagara grapes make greenish pink jelly.

Green gooseberry jelly is made the same way as apple, and is a delicate green in color. The berries should not be more than half ripe. If for any reason the juice of any of the fruits remains liquid after being boiled with sugar for jelly, set the glasses in the strong sunlight throughout the day for three or four days in succession of possible, then if it still refuses to harden properly turn into the preserving kettle, melt, add a third as much strained apple juice and boil until a little cooled on a saucer assumes the desired firmness.

Do not attempt to make jelly without a jelly bag, made from a square of well-washed flannel sewed together to form a triangular sack, which may be hung up by tape loops or sewed to a wire ring.

The double boiler or cereal cooker will be found of great service in jelly making; so, too, is the perforated dipper, long-handle spoon and regular dipper, which will save the housewife many a burn or face scorching.



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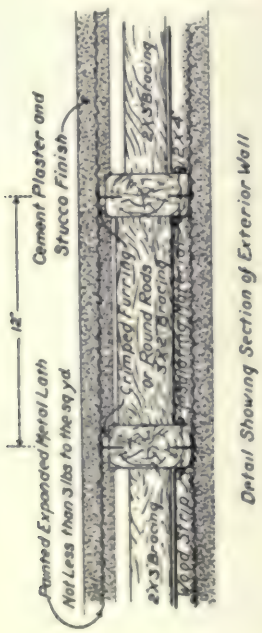


Metal Lath in Residence Construction

H. B. McMaster, in "Architecture"

THE following detail of a typical exterior wall section used as the basis for a specification for stucco construction if followed carefully will give one a building economical and enduring in any habitable climate. Before starting to outline a specification I should like to recall to the reader a phrase used at the heading of all specifications by Theodore Cooper, the bridge engineer who designed the first Quebec bridge; it was something like this: "No specification, be it ever so perfect, can be regarded as in any sense a substitute for experience and common sense."

Framing. — Flimsy construction in framing is false economy. The best will prove cheapest. The studs spaced at 12 inches between centers wherever possible, should be run entirely from foundation to the rafters without any intervening horizontal grain in the wood. These studs shall be tied together just below the second story joists by a 6-inch board which shall be let into the studs on their inner side, so as to be flush and securely nailed to them. This board will also act as a sill for the second story joists, which in addition will be securely spiked to the sides of the studs. At two points between the foundation and the eaves, brace between the studding with 2 x 3-inch bridging placed horizontally but with the faces of the bridging inclined in alternate directions in adjacent spaces. Modern fire preventive methods should prompt one to make provision for fire stops in walls between floors, particularly if wood lath is used on the inside of the wall. One of many methods that might be suggested is shown by the accompanying cut.



All roof gutters should be fixed and down-spouts put up before the plastering is done; the down spouts should be temporarily placed about a foot from the wall so there will be no break in the plastering where they are to be finally fixed.

Wood copings or rails for tops of parapets, balustrades, etc., are not so good as cement for they may curl up, warp, check, crack, and in various ways fail to do what they should—keep water from getting behind the plaster. This also applies to brick chimneys which, when plastered, should have wide and tight caps of concrete or stone to prevent water running behind the plaster.

If only wood sills are used, they should



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project well from the face of the plaster and should have a good grip, either by being placed with a downward slant or by a groove rebated in the under side of the sill near enough to its edge that it will not be covered by plaster. The drip is an essential of good stucco construction that cannot be sighted. It must be used to prevent water getting behind the plaster.

Furring.—Use painted steel rods or painted crimped furring. One-quarter-inch is best and it should not be over one-half-inch at the most. This furring is to be applied along the face of the studding with galvanized staples.

Insulation.—After the lath on the outside has been back-plastered the air space may be divided by applying heavy building paper, quilting, felt or some suitable insulating material between the studs, fastening it by nailing wood strips over folded ends of the material. This insulation should be so fastened as to clear the 2-inch bridging, leaving the preponderance of the air-space on the outside. Care must be taken to keep the insulating material clear of the outside plaster and to make tight joints against the wood framing at the top and bottom of the spaces and against the bridging where the 3-inch face intercepts.

Lathing.—Before lathing, it is well to apply one coat of paint or waterproofing to the face of the studs where it will come in contact with the plaster. Good construction is not possible with wood lath. Best results are gotten with the heaviest gauge metal lath which should weigh not less than three pounds to the square yard and it is best to use the kind that will give the largest key. It should be painted, also, to protect it until it can be applied and covered wtih the Portland cement plaster. The lath is fastened horizontally over the furring strips at 12-inch centers with 1¼ by 14-inch gauge staples. The sheets when lapping between furring should be tied with No. 18 gauge wire and each sheet should be lapped or locked with the adjoining sheet. There should be 6-inch strips of metal lath bent around the corners and stapled over the lathing, unless the sheets of metal lath as applied are folded around the corners so as to secure a proper bond for the plaster and prevent cracking at the corners. In applying lath to the inside of a building the sheets of metal lath should be folded around the inside corners to prevent the cracks which so often develop there when wood lath is used.

On the ceilings of bathrooms and kitchens where occasionally exposed to steam it is frequently seen that areas of plaster will drop from wood lath for these reasons.

The above might have been expected because in every building there is moisture which is absorbed by the plaster. This moisture remains at the intervals between the lath, but where it is over the wood lath, it is sucked into the wood. The moist plaster accumulates more smoke and dust than the dryer portion and the outline of the wood lath is brought out in consequence.

The use of any material which has a too great affinity for water may cause trouble when plaster and especially stucco is applied to it. It will pull the water out of the mortar, then it will crack and disintegrate.

The objections to wood lath are not found in metal lath. The key is continuous over the entire back of the wall; it does not absorb moisture; expansion is due only to temperature, and plaster and metal lath expand and contact equally under like conditions.

It is very important when there is a desire to save space to know the space-saving value of the 2-inch solid metal lath partition. Assuming the average room to be 10 feet by 12 feet, or 120 square feet, with 6-inch walls, and 10 feet 4 inches by 12 feet 4 inches or 127.4 square feet with the 2-inch wall of metal lath and studding, we find there is over 6 per cent more occupiable or rentable space in the building with 2-inch partitions. Whether one is lessor or lessee, it is fundamentally a matter of paying a certain price per square foot for shelter. Therefore, the 2-inch solid metal lath partition at less expense increases the return on a building more than 6 per cent over that where the 6-inch wall is used.

It may not be so essential in the lower priced residence that metal lath be substituted for wood lath on the interior but for exterior work the reasons for the use of metal lath are multiplied.

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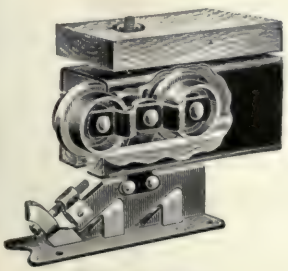
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CEMENT—Continued

Care should be taken that all trim be placed the proper distance from the studding or furring to show its right projection after the plaster is on. It is a common mistake to allow too little for the lath and plaster, with the result that moldings which should project from the face of the wall are back from it or partly buried under the plaster, thus missing the effect desired. About 1½ inches should be allowed for the lath and plaster, making sure that the projection of the moulding to show when finished is not measured in as part of this thickness.

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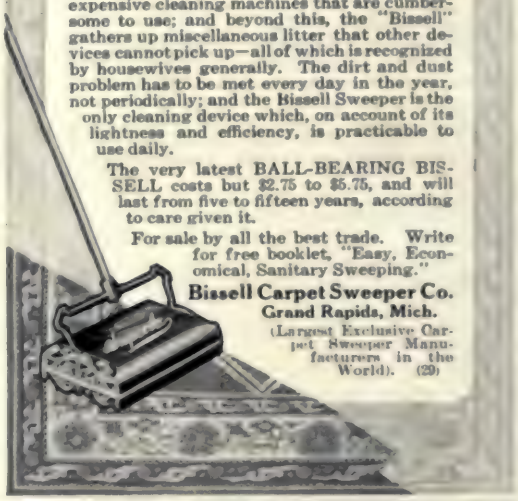
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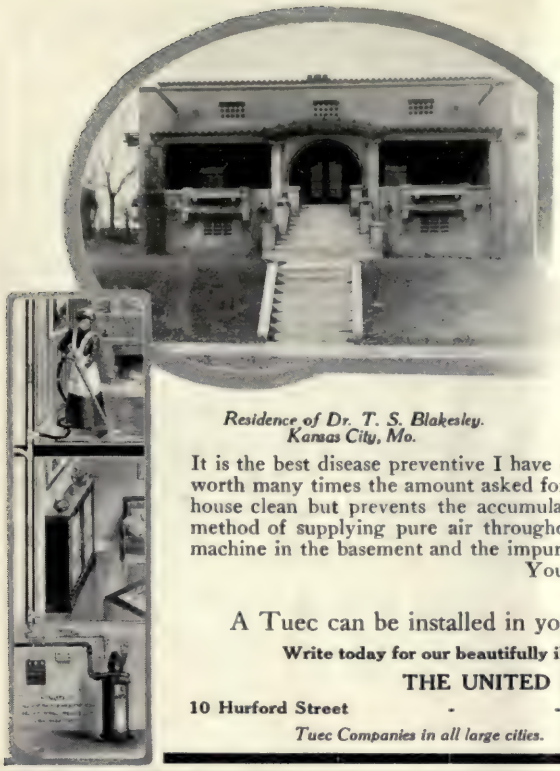


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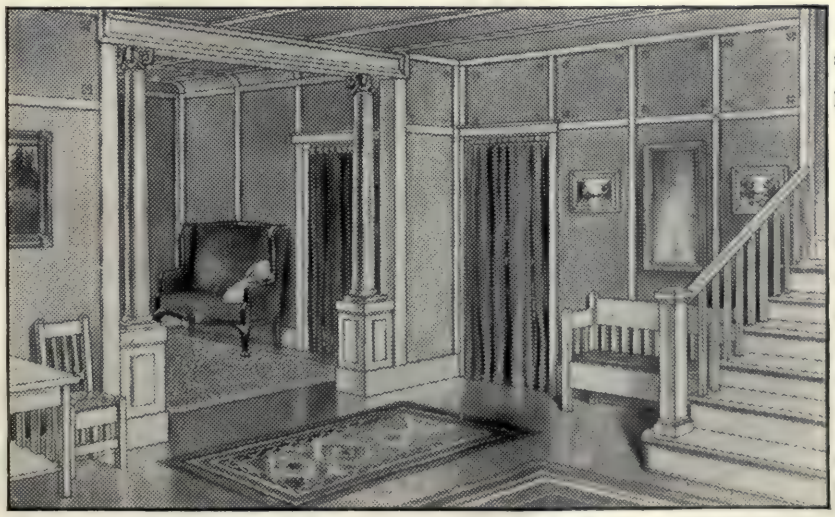
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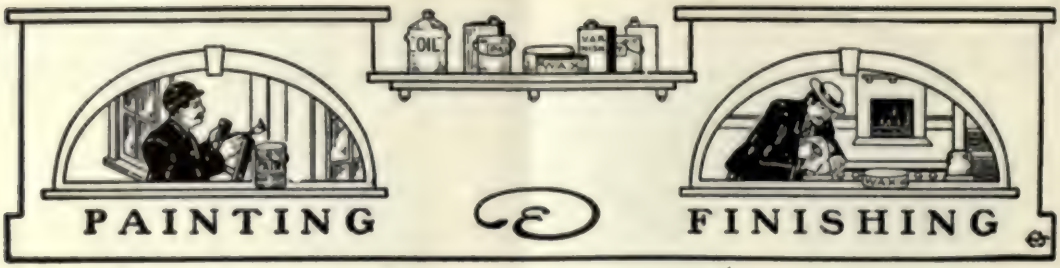
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Color Scheme Important in Relieving the Coldness of Gray Exterior.

THE neutral gray of a concrete house is the best possible background for the display of a one-color garden scheme. In the first place, the concrete itself can be slightly tinted when it is being mixed, so that it will be a cool bluish gray, a warm red or a deep cream. It can be made to imitate the local rocks in color—sandstone, limestone, granite or any of the infinite modifications of soft and warm or hard and cold gray rocks. It is needless to say that the concrete must not be in any sense a pronounced shade, but only merge toward the tone of gray that will be the most harmonious with the surrounding country and with the flowers that are to be grown near it.

Unless the concrete be mixed to a definite tone, it will be, when finished, a cold, unsympathetic, trying gray, and for a house of this type the predominating color of the flowers should be yellow, for yellow, like the sunlight, will warm the coldest slate tones into cheeriness. Any of the yellow climbing roses or the orchid-like canary vine, trained over a porch or pergola, or allowed to climb in and out through a lattice against the walls or around a window, will warm and mellow the whole house, no matter how cold the tone of the concrete may be or how severe the lines of the building. Forsythia, tulips, poppies, asters, daffodils, nasturtiums, bush roses and many other yellow flowers shine their brightest when planted near the foot of a concrete wall.

Flowers of the shades of blue or purple, such as heliotrope, asters, Canterbury bells, delphinium, stock, cosmos, wistaria, clematis, are particularly effective against a light gray greenish wall. White flowers, such as daisies, chrysanthemums, candy tuft, climbing roses, can be planted with good effect with the shades of violet. —Exchange.

Painting the House.

For those who wish to give their houses a fresh coat of paint, it may be interesting to know that most architects have generally discarded the so-called "Colonial" effect of yellow ochre with white trimmings, and that, for large houses, plain white lead for the exterior is more and more in favor. There was a time, says a writer in "House Beautiful," when white for country houses was denounced as "glaring" and "vulgar;" but architects, who have no time to spare for sentimentalizing, and who remember the ivy, geraniums and purple clematis trailing over the whitewashed Italian walls, or the passion flowers and roses casting shadows on white French and English villas, know well that no other color adapts itself so well to stately and beautiful rural effects. For small cottages, especially where they are near the street, and need to be made as unobtrustive as possible, the olive greens once popular among architects have been revived, with great advantage. Builders whose attempts to produce soft effects with emerald green or medium chrome have not been crowned with success, do not sympathize with the architects in this matter; but a really good broken green is one of the most charming and lovable colors that can be put on the outside of a small house, well buried in shrubbery. It is hardly necessary to say that red cornices should be avoided.—Building Age.

Glue Sizing Saves in Painting Weathered Surfaces.

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two subsequent coats to do a good job. Now a job that will last just as long and look as well as three-coat work on old buildings may be done with two coats of oil paint, which will save, perhaps, half the oil, at least one-fourth.

Make a size in the proportion of one pound of ground glue to one gallon of water. If the surface is very bad, use a little more glue. Allow the glue to soak in cold water over night or longer. Then melt it in hot water. Have the water just hot enough to melt the glue thoroughly. If the water is too hot it destroys the tenacity of the glue to some extent.

If the subsequent coats are to be in light tints, stir in some whiting, enough to show a little when brushed on. If it is a brick wall that is to be finished in red, use Venetian red instead.

Keep this sizing warm, and brush on with a large brush. This will fill all the small cracks, and two coats of oil paint will make a good job.

A job done in this way will stand any ordinary exposure just as well as three coats of oil paint. The writer, during his thirty years experience as a painter, has always had good results by this method. Why won't it stand? Because the moisture will affect the glue, you say. Let me tell you, if the work absorbs enough moisture to affect the glue, the same would destroy any oil paint also. No. There is no danger of any trouble from the glue. A first coat of glue sizing and color will stand anywhere that oil paint will. Furthermore, a coat of glue sizing and color fills better than oil priming, consequently a smoother job when finished.—Amer. Car. & Builder.

Floor Waxing by Electricity.

New household uses for the electric motor are being found one by one. This time it is a machine for waxing the floor. The apparatus, which has just been introduced in Berlin, Germany, where it was invented, consists of an electric motor, the bottom of which is formed by a strong revolving brush. The motor is connected with one of the electric light sockets; the chambermaid takes hold of the handle and moves the small motor from one part of the room to another until the whole floor is polished. The wax is, of course, applied before the polishing begins. Thus the work can be done much quicker, more perfectly and without any effort on the part of the operator. Every modern flat in Berlin is being provided with one of these electric floor polishers.

In the old-fashioned way the polishing of hardwood floors requires much labor and strength, for the floor has to be covered with wax, and this must be rubbed with brushes until the wood is as smooth as ice and shines like a huge mirror.

Blending Colors.

I have an inside job where I must blend the colors, starting light at top and getting darker further down. What is the best method for doing this?

You should first lay off your wall in three or four horizontal strips of equal width. Then mix up as many lots of paint as there are strips, each lot of paint to correspond to the prevailing tone that you wish to have shown on that strip. The paint should be mixed about half oil and half turpentine to prevent its setting too quickly. Paint the top strip first and then with as little lapse of time as possible paint the second strip, using, of course, a different brush. Then with the same brush used in the second painting commence to work the color on the second strip up into the first strip. This may be best commenced by upward strokes, carrying the brush from the second strip up into the first. Later, horizontal strokes will help to spread the color evenly, and you can see as the work proceeds just how much of this brushing will be required. Proceed downward with the other strips in the same way. If the entire wall is stippled before the paint becomes dry, the blending will appear much more perfect.—Dutch Painters' Problems.

The preparation of the surface of old interior woodwork for repainting at times presents difficulties. The surface may have grease upon it which is very difficult to remove with soap and water. It may be so hard and glossy that the paint, when applied to it, will stand out over the surface without flowing out. The usual method of treatment is that of washing with soap and water and sand

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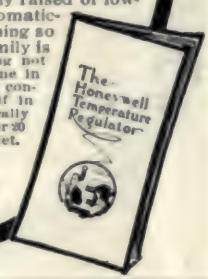
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papering. This treatment is usually satisfactory, but at times is not as convenient nor as practicable as could be desired. This leads to the suggestion of another method of treatment.

Nearly all paint removers contain benzole which is a light solvent obtained from coal tar. It has the property of softening up paint, dissolving to some extent the dried oil, and permitting the paint to be removed by scraping.

If commercial benzole is brushed on a hard painted surface and immediately wiped off, the effect is to remove all the grease from the surface and to cut the gloss sufficiently so that when the paint is applied over this surface, it will flow out smoothly, wetting the surface nicely and giving good results. On comparatively soft paints, the use of benzole is not so desirable nor so necessary. These paints can be cleaned with soap and water and then usually there is no difficulty in the further application of paint.

Our advice is that where other methods of cleaning are not found satisfactory, the surfaces be sponged off with ordinary commercial benzole. This benzole will evaporate quite rapidly, and in a half hour after the sponging has taken place, the surface can be painted. The odor of commercial benzole is not particularly pleasing, but it soon disappears and is not unhealthful.—Dutch Painter.



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Helping the Furnace With an Electric Fan.

MANY people, many trials, and many varying conditions are responsible for even the most trivial discoveries. The use of the electric fan is after all only an outgrowth of Adam's discovery that even a hot breeze had a cooling effect on his perspiring brow. We don't know whether anybody ever fanned a breeze across hot stones to warm a room, but somehow, somewhere, some bright person has thought of blowing air (with an electric fan) across a radiator to keep a comfortable temperature during the cold weather. The scheme is good. We tried it and we know.

We say tried it, and we did, with good results. Our office boy tried it too, but he had the principal of the thing wrong. The cold spell had let up to a certain extent, the room was hot, and the boy tried to cool the radiator off by letting the fan blow on it. The scheme looked good to him. Of course the room got hotter, which, after all, only demonstrated the efficiency of the scheme; the radiator was cooled a lot faster, i. e., it radiated heat a lot faster, and the temperature of that room rose like a rocket.

But to get on the track again; this radiator scheme is not the only idea in connection with making cold houses comfortable in winter. A fan can be put in the cold-air intake of a hot-air furnace, and the circulation will be improved so much that you get a rush of warm air, whereas you may only have had a gentle current before. It gives more flexibility to your heating system by enabling you to crowd it a little when necessary; and it reaches every room in the house.

Helping your heating system is only one of the many winter uses for the electric fan. Like the man in the fable who blew on his soup to cool it, and again on his hands to make them warmer, the fan is a means of making the temperature endurable, whether it be too high or too low for comfort.—Electric Magazine.

Hot Water "On Tap."

Builders are often asked the following, or something like it:

"Why should I, who am about to build, include a water heater in the plans for my new building?"

This concrete question suggests its own answer, for if a man is about to build a home his all absorbing idea will be to have the building and equipment as near perfect as possible in the matter of comforts and conveniences. Therefore, the plans would not be complete — in fact very incomplete, without some proper and ample arrangement for providing hot water for domestic and lavatory purposes.

He would better omit several other things seemingly indispensable, or, if need be, eliminate ornamentation and artistic effects, rather than sacrifice comfort, health and sanitation, by omitting the hot water supply.

Would he omit the bath tub? Certainly not, but what would tbe bath tub signify for comfort without hot water to complete the delight and wholesomeness of the bath.

Next to the cooking stove or range in the modern residence, the most necessary and constant requirement is hot water.

Up to a few years ago, when hot water was needed during the summer it was a case of "Polly put the kettle on" and then wait until a scanty supply was heated. Later a small gas heater connected right with the range was attached to the boiler and it did fairly well, provided somebody lighted it two or three hours before the hot water was needed.

The great trouble with this lay in the fact that the water was seldom ever hot at the moment it was wanted; in the

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waste of fuel necessary to maintain a supply of hot water at all times; and to the fact that the whole kitchen was heated up in order to secure a little hot water.

Now all this is avoided by the installation of one of the "instantaneous" gas water heaters now on the market. Some of these are set up in the kitchen, some right in the bath room. Both the automatic and non-automatic types are manufactured in a variety of sizes sufficient to meet any requirements, from the average small home or apartment to the largest hotel or institution service. The rapidly increasing sales are the best evidence of the popularity of this class of water heater.

There are also many practical and successful basement, coal burning water heaters on the market. For use in residences, apartment buildings and small plants, where it is desirable or necessary to minimize janitor services, a water heater made with a self feeding magazine is found to be satisfactory and efficient.

Experience shows an ordinary family will use from 100 to 120 gallons or more water in 24 hours. The warm water for domestic supply should average 130 to 150 degrees.

Hence a heater should be provided of sufficient capacity to raise the amount of water required per hour, from about 40 degrees in the winter and 60 degrees or more in the summer, to a temperature high enough for lavatory uses.

It is both economical and very good practice to have a storage tank from 50 per cent to 100 per cent greater capacity than the water heater. Thus proportioned, the hot water can be stored or accumulated at times when little water is being used. The heater can be run with a lower and steadier fire.

With a liberal storage tank, sudden or unusual demands for hot water are easily met, and without having to force the heater.—American Car and Builder.

Gills for Houses.

A physician living in Kansas City, Mo., reports a remarkable illustration of what he calls "gills" for supplying oxygen to rooms which were poorly ventilated. Writing in the Medical Record, he states that in his household natural gas is used for fuel and light, that this gas has so little odor that its presence is not readily detected, and that one night the gas which had been lighted in the upper hall communicating with the sleeping apartments was extinguished during the night by reason of lowered pressure.

The pressure rose during the night, filling the bedrooms with gas, but the family slept comfortably until it was awakened by a roaring noise, which was found to proceed from the open gas jets.

The doctor praises the "bridge" that enabled his family to survive this dangerous experience by ascribing it to an arrangement for ventilation which he had adopted and called "gills," because it supplies oxygen as do the gills of a fish.

The apparatus consists of "a yard square of 6½ oz. drill or muslin sheeting stretched and secured upon a light frame or a summer screen to fill the lower half of one window in each room." The doctor enters into a scientific and correct explanation of the modus operandi of these gills, which is omitted here. It is sufficient to call attention to this simple and efficient device for ventilating sleeping and living rooms during the cold winter months—an important and usually unappreciated preventive for colds and pneumonia.

Not the least interesting feature of this "discovery" is the fact that these "gills" have been in practical use at our agricultural stations and in many well conducted poultry farms. The method has therefore been thoroughly tested.

An interesting invention, just placed upon the market, is the Reliance Rotary Chimney top. This improved chimney top is manufactured by the Berger Manufacturing Co., Canton, Ohio, and can be used on every size and type of chimney. Heretofore, chimneys have been subject to annoying down drafts caused by surrounding buildings. The Reliance hood, extending below the chimney top and encompassing it on three sides, also revolving instantly with every change of wind, entirely eliminates this nuisance. Particulars will be furnished by the Berger Co. to any one interested.



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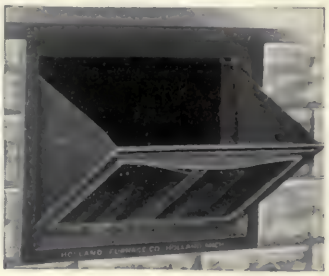
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SPLINTERS AND SHAVINGS

Tile Floors.



N recent years the old-fashioned tile pavement has come into great favor, particularly the large, dark red squares known as Welch tiles. To support such a flooring on a house built of masonry is no great problem, for the necessary bed of concrete rests securely on a masonry arch as some form of terra-cotta construction. But where a tiled conservatory or porch or diningroom is desired in a frame house, how to support the concrete bed on which the tiles are laid is a matter for considerable care. It is best done by having rough boards cut in between the floor beams and resting on seven-eighth-inch strips nailed to the sides of the beams. The tops of these boards must be at least four inches below the finished floor line, and better still five inches, to allow of a concrete bed of sufficient thickness. A thin one would surely crack. The tops of the beams should be beveled off to an edge in the center. This is necessary for two reasons; it allows whatever moisture may gather in the concrete, both while it is green and during subsequent scrubbing operations, to run off; and also it is much better structurally, as it lessens the shallowness of the concrete over each beam.

Where a tile floor is put into an old building during alterations further care must be taken to cover the rough boarding and the beams with waterproof paper to keep the moisture from discoloring the ceiling below. No heed should be given to builders who advise soaking the beams with creosote as a protection, for the creosote will eventually find its way to the plaster beneath, whence its stain will be impossible to remove. Where the tiles are for an exterior porch under which there is no excavating, it is best to build a brick retaining wall as foundation for the porch, fill the enclosure with sand, bring it to a level and spread on it an eight-inch bed of concrete for the tiling. This all sounds troublesome, but one is well repaid by the stability and permanence of a properly laid tile floor. As to its beauty, that depends on the selecting of the tiles. Decorated ones are risky and except for the famous examples such as the Persians or the Moors once made, there is greater beauty in good plain colors that contrast, not harmonize, with the walls.—House Beautiful.

For Better Nails and Nailing.

Toledo, Iowa.

To the Editor:

I am thoroughly in sympathy with the Better Building idea, having for years stood for quality. To my mind there is something more important than this door business, which a good many of the boys seem to be getting wrought up over, and that is, wire nails; or, as they ought to be called, iron pins.

I always have and do still use the old common cut nails for casing and finishing; but better than that, I use the four-penny cut nail for shingling. Brother House Builders, when you are shingling try this way: I always strike three lines in shingling so that I can put down two or three rows at once. I use four-penny cut iron nails and drive them not over five-eighths of an inch from the edge of the shingles. I have a roof here, put on this way either 25 or 28 years ago, I don't just remember which, and the shingles have curled but very little.

Favors Galvanized Nails.

Watertown, N. Y.

To the Editor:

I have had a good many years' experience in repairing roofs, and it has often been a wonder why architects will allow contractors and in fact any one who has charge of a building in process of erection to nail on shingles with three-penny nails. In my work I find that the principal reason for so many leaky roofs is due to the use of three-penny wire nails, which quickly rust off, leaving the shingles loose with holes where the nails were. Otherwise the shingles are sound.

New Roofing Discovery

Works Wonders in Beautifying Home!



For Simplest and Grandest Homes

CHARMING Moorish beauty and dignity of appearance of Metal Spanish Tile gives an air of distinction to the home graced by this wonderful new and practically indestructible roofing.

It has taken home builders of America by storm, for it is the modernization of the wonderfully beautiful roofs of historic Spanish edifices.

The art of making this roofing, left behind by fleeing Moors driven out of Spain centuries ago, until 1910 could not be made practical for the modern home, despite its alluring beauties.

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Its scores of vital, practical advantages cost no more than common roofing, yet mean tremendous economy—it needs no repairs and outlasts several ordinary roofs because of its practically indestructible metal construction.

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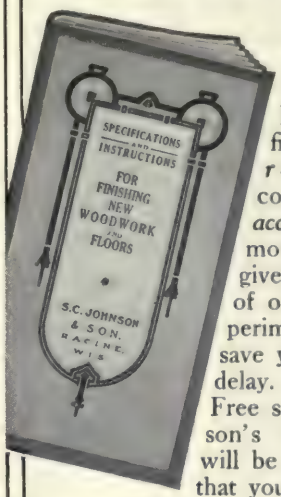
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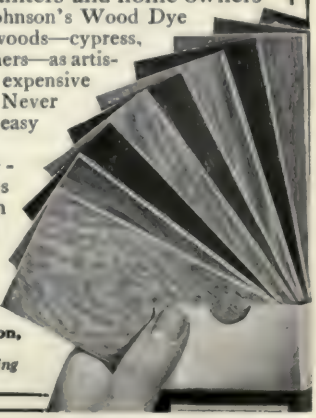
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No. 132 Green Weathered Oak
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but have to be replaced on account of these holes. The architects should specify galvanized four-penny nails, which will not rust off during the life of the shingles.

Casement Windows Popular.

Old Fashion Coming Into Use—Better Constructed to Keep Out Rain.

The foreign casement is steadily growing in favor in American country homes. Not only are architects drawing it in their new plans, but owners of long built, double hung sash windows are putting in their place the quaint casement of romance. The old name for window was windore—a door for the wind to pass in and out. In our hot summer months they ventilate a room better than do the sashes that slide up and down. That casements are more beautiful is the opinion of many who compare them with the charming clusters of diamond panes in the Ann Hathaway cottage.

This preference extends to commercial buildings where good ventilation, safe window cleaning and the doing away with the curtain and drapery nuisance are appreciated. This is the recognition of the utilitarian quality of a window considered antiquated.

According to the sort of casement and fastenings chosen, this revival may be a blessing or a curse in the home. Where the opening is six or seven feet high, with sill upon the floor, it is called a French window—almost universally used in France and beautiful for any exit that opens on lawn or veranda. Far less formal is the shorter casement, set well above the floor with upper part divided to form a transom. It is perfectly adaptable to American cottages and bungalows that claim no English prototype.

It would never have fallen into disfavor had it been sufficiently well constructed to keep out the weather, builders say. In the French casement, opening inward, the rain entered at the bottom; in the German and English style, opening outward, it entered at the top. Anglo-Saxons, more sensitive to domestic discomfort than were the rest of Europe, got tired of the nuisance. Instead of setting themselves to perfect the existing window, they invented another — the double hung sash. This did keep out the rain, but it stuck when new and rattled when old. So now the people are going back to the casement again and are getting it weather-tight.

This result is positive when the casement sash is of metal. All the earliest casements were lead. This construction may be seen today in any of the old English manor houses. The scrupulous sixteenth century builders introduced the wrought iron casement, still retaining the leaded panes.

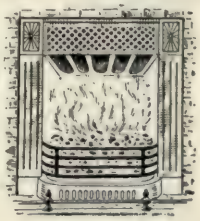
The cheaper wooden construction did not come into vogue until 1700, and was always more or less of a failure in point of impenetrability. How well metal works is shown in the Singer building, New York, exposed to the worst that wind and weather can do, is fitted with 3,000 metal casements, guaranteed weather-tight by their English makers.

Metal casements can lend beauty and security today as they did to the early English residences, the Minneapolis club being an example. They come for any size opening, with simple handle that closes and locks them, and an adjusting rod holds them open at any angle desired, rigidly and without rattling. Office building windows are bolted directly into the steel constructional work, but the same window may be inserted into stone or wood, and in a new house or an old. —Ex.

Popularity of Small House Construction.

Construction of modern homes to rent and to sell at moderate prices is becoming more and more a feature of the real estate business in nearly every city in America. It is readily noticed that this feature of the business is of the investment nature and that American cities generally are vastly benefited by the real estate firms who construct such homes. The real estate business thus becomes a component part of the work of developing a whole city.

The homes constructed by real estate firms in many cities range from one-story dwellings with four rooms and bath, upward. Those with six rooms and bath and of one or two stories seem to be the most popular in some localities.



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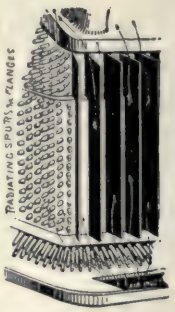
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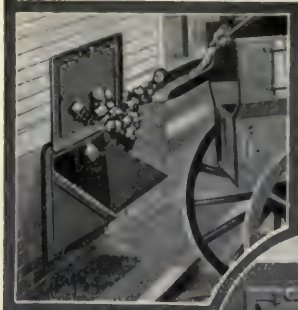
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New Booklets and Trade Notes

THE Mason Safety Tread Co., Boston, Mass., send us their booklet illustrating and describing their device for insurance against slipping, on stairs, landings, inclined ways, car steps, etc. The Mason Safety Tread can be used upon stairs of any material, upon old as well as new surfaces, is durable and efficient.

* * *

The Norman W. Henley Pub. Co., New York, publishers of a series of practical hand books for the worker in concrete, have just issued two books, No. 10 on molding concrete flower boxes, jardinieres, etc., and No. 11 on molding concrete fountains and lawn ornaments. The author, A. A. Houghton, gives instructions for constructing and using new and unpatented forms of molds for this work easily put into practice, so that the home builder may ornament his own grounds with fine effect at slight cost and labor. The work of making a concrete fountain, heretofore supposed to belong only to the professional worker, is here so fully illustrated and described as to be within the skill of the average reader. The books cost 50 cents each, respectively.

One would think there could be nothing new in heating plants, with so many excellent manufactures in the field, but the Schwab & Sons Co., Milwaukee, Wis., have put out an uncommonly attractive booklet in delft blue and white, introducing their new Gilt Edge Boiler for Hot Water Heating. The booklet describes and illustrates the new features in boiler construction that have been studied out by this firm, to increase boiler efficiency and economy of operation. We commend the booklet to our readers. The catalog shows a superior line of goods, listed in a most understandable and informing manner.

* * *

We are in receipt of the exceptionally handsome catalog of the *National Fire-Proofing Co.*, manufacturers of *Natco Hollow Tile.* This large catalog, now in its sixth edition, is bound in rich mandarin blue covers of heavy paper, and contains sixty-five large half tones of examples of residence construction upon Natco Hollow Tile, supplemented by a variety of miscellaneous types of public and semi-public buildings, together with blue print details for this construction. Architect's specifi-

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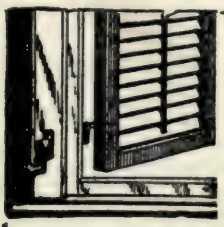
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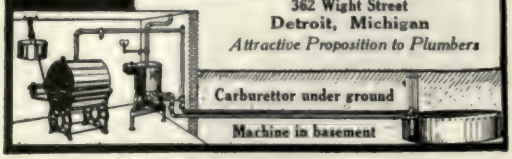
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NEW BOOKLETS AND TRADE NOTES—Continued

cations and a table showing building cost as compared with other methods of construction. We acknowledge also from the same company their very interesting and attractive book, The Natco House, price 50 cents, replete with interest from its artistic cover in color to the last page. The first portion of the book presents a series of designs for a small house to be built of Natco Hollow Tile, submitted in competition by well known architects. The competition was given to encourage the building of a better class of small houses and the cost limited to about $6,000. The designs are not only artistically interesting but meet the requirements of the modern home. The second portion of the book presents further examples of houses already built of Natco tile in different sections of the country and by different architects.

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The manufacturers offer these new shingles in such standard colors as Indian red, slate and natural gray.

* * *

Catalog *"H"* of the Hughes Co., Pittsburg, Pa., shows the new and attractive specialties of this form in opal glass and vitreous china bathroom and toilet fixtures. Housebuilders will be interested in this catalog and others which are to follow.

* * *

The Consolidated Expanded Metal Co., Pittsburg, Pa., have favored us with their handbook of design on **"Steelcrete"**—a system of reinforcement for concrete construction for which they claim superior merit.

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IDEAL HOMES MAGAZINE

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A MASSACHUSETTS HOME.

The House Fills the Lot Admirably, Being Long and Narrow.

KEITH'S MAGAZINE

VOL. XXVIII NOVEMBER, 1912 No. 5



THE QUAINT TREE-LIKE PATTERN OF THE CARVED MANTEL.

A Massachusetts Home Modeled on Rural English Design

By W. J. Freethy

WHEN the average person contemplates building, it is usually with the idea of erecting what has been a visionary house,—their "castle in the air," so to speak. They have in mind a well-defined arrangement of the rooms, and very frequently positive ideas of style, which the architect must follow. Visions of houses they have seen illustrated, houses at home, in the neighborhood—distant cities, or possibly recollections of a trip abroad. English homes are particularly domestic in character and their style appeals to us, being suited to

our climate and methods of living, and today they are largely a basis for many good American types.

In the rural districts of England, retired from the highways, one may often see, perhaps over the well-copped hedges, charming bits of domestic architecture. Houses quaint in outline of roof and shape of walls, due to constant additions or the eccentricities of the owners; all, however, harmonious, attractive and livable; some of plaster overgrown with vines; some of brick, and many with half timber work, there a real indication of the construction, but with us, alas, simply ornament applied; windows large and small, some latticed, some leaded, all proportioned to the rooms in which they occur and with due reference to the outlook. Gardens gay with flowers, lawns cut to a naplike surface.

These are all attributes of such dwellings. The subject of this article, designed by Robert Coit, an architect of Boston, nearly approaches the description above, except for such changes which make it distinctly American in character.



THE "MAN'S" OWN ROOM.

The setting of the house is extremely attractive, perched as it is on the hillside, with large trees for a background, and at

the end of a short, winding road. In plan, the house is broken in shape, fitting the lot admirably, and in this way following the curve of the road, giving additional variety to the outlook and a picturesque exterior and roof line. It is long and narrow, with the living-room across the end having a south, west and northerly exposure.

The entrance porch, placed at about the center, is treated in half timber, with panels of cement, as are the gables, the piazza and the second story walls. The porch opens into a vestibule and spacious hall. From here glimpses are obtained





of the den, living-room and dining-room. The hall is finished in quartered oak, and the stairs, in lieu of the ordinary turned balusters, have balusters sawed in a simple pattern. The string boards are paneled, and the posts have square sawed tops and drops all serving to give the staircase an attractive and distinctive air. The walls are divided horizontally by a chair rail, with brown burlap below and a figured paper above in warm browns and greens.

The living-room, which opens from the hall, is thirteen feet wide by nineteen feet long. The finish here is birch stained a rich mahogany brown. The paper is a richly figured green and the ceiling is tinted in water color in a yellow tone. The mantel here is quaint in pattern and has panels of sawed overlay closely resembling carving. At one end of the room the windows are recessed from the wall, forming a bay with seat, the arms of which are sawed and make the ends of well-filled bookcases.

From the living-room one may obtain a glimpse of the den, through leaded glass casement windows. The den, 10x11 in size, is large enough for its purpose, and is the "man's" room of the house.

The dining-room is simple, but well proportioned, being 13x15, and octagonal at the ends, with a large bay to the south and a buffet next to hall. Here the early sun enlivens the morning meal and stays throughout the day. Here we have the customary plate rail carried on small brackets, and below this the burlap has been stained to match the dark oak finish, while above a tapestry paper in old blues has been used. The floors in these rooms and hall are of quartered oak. Care has been taken to obtain an ample china closet, with well arranged cases for china, and plenty of drawers and cupboard space.

The kitchen and pantry, with large entry, are all finished in hard pine with painted walls. The back stairs allow the maids to reach the third floor without disturbing the rest of the house. The cellar is light and airy, containing a large laundry, with an entrance at grade to the laundry yard. There is a brick storeroom, furnace-room, and ample space for coal and wood. The second floor has four family bed-rooms, and a large bath-room, plenty of closet room, linen closets, etc.

A Unique Club House for Girls and Boys

By Mrs. Nixson Hopkins



A UNIQUE CLUB HOUSE FOR GIRLS AND BOYS.

THE widening of several streets on the edge of a western city made it necessary to take up a good many feet of cement sidewalk. In so doing the walks were broken into pieces, which were practically uniform in size. This material was piled along the street and offered free to any one who would haul it away. In fact it was placarded to that effect.

A clever woman passing that way conceived the idea of using these pieces of broken cement as building material and straightway had it taken to her own premises. Further, she secured the trees that were cut down when the streets were widened.

Out of this combined material she planned a club house for her girls and boys. It consists of a large living room with a good sized fireplace, a kitchenette and a little dressing room.

The broken cement of the exterior is put together with cement of the same color—that is natural. All of the window and door casings are made of the limbs of the trees, cut in half with the flat surface against the house. And just off the main room, looking toward the tennis court, are two rustic balconies. Besides a per-



THE MAIN ROOM.

gola across the front of the house, there is one running along the whole length of the south side.

The roof is tile and the chimney is brick. There is a fireplace on the outside as well as inside the building. The outside one was designed for use in connection with the tennis court, which is situated to the right of the club house.

On several festal occasions the court has been enclosed with canvas and a big fire made in this exterior fire place, with charming effect. Even as late as Christmas one year, the court was enclosed and two hundred poor children were entertained here with a Christmas tree.

A wall running along the side of the court on one side, merges with the wall of the house. You enter the club house from the garden, going under the pergola which in time will be covered with grape vines.

Inside, the rooms are roughly plastered with the same rustic finish for doors and windows that was used outside.

The fireplace is of stone with a log for mantel shelf, supported on each end by two more logs.

There are hardwood floors, and the furnishings are in keeping with the general character of the house. Indian rugs were used for the floor of the main room, coarse hangings for the windows, with chairs, seats, etc., of wicker and mission furniture.

A large rustic table in the center of the room serves as a dining table when the girls and boys are entertaining. The kitchenette and dressing room depart from the text of the house somewhat as the woodwork here is enameled white.

The club house is not only very attractive, but offers a suggestion for the use of otherwise useless material.

Windows and Window Seats

By Mabel Tuke Priestman



GOOD EFFECT OF SEAT EXTENDING FROM ONE WINDOW TO ANOTHER WITH SHELVING ABOVE IN THE CORNER.

THE window seat is an excellent opportunity for introducing a decorative and convenient feature into a room, especially when it is successfully incorporated with the architectural lines of the house, but it is of very great importance to take into careful consideration the placing of window seats when the plans of a house are being made, as their success depends a good deal on their construction.

Perhaps the most suitable room for a window seat is the living-room; it seems to give an inviting and cosy appearance to the interior, and a suggestion of informality that makes itself felt. The dining-room, too, has a claim, for, on occasions when the dining-room is being used for a tea, the extra seating room is invaluable; then the seat can always be utilized for a display of blooming house plants and bulbs, for in a room where the



COZY EFFECT GIVEN BY CORNER WINDOW SEAT.



WHERE SPACE BENEATH IS UTILIZED FOR BOOKS.

family gathers at least three times a day a window pageant seems particularly appropriate. Bulbs are inexpensive and easy to grow, and from the appearance of the first bud until they finish blooming are a source of interest and beauty. Bulbs should be started in the cellar, kept in a cool, dark place and watered two to three times a week; in about six weeks they should be relieved of their cover and allowed to develop their roots in the cellar for a few weeks, when they will be ready for bringing into the light.

When planning for window seats do not have them too high or too narrow, and as they usually have a mattress-seat, allowance must be made for the additional height which this will give. Most houses have not enough room for stowing things away, and window seats are often handy places for this purpose, so it seems advisable to have them made like a box.

A window seat is the most decorative when it is placed under one window and allowed to turn the corner and extend to another window; one of the illustrations is a good example of this; the design of the settle-ends adds greatly to its appearance with the wood-work running up against the wall, and the shelving above for books is unique. It was designed by the mistress of the house and made by a carpenter at a summer watering place. The curtains, too, were made by the owner of the cottage; they are only flowered cheesecloth, but are exactly suited to the simple furnishing of this living-room; a valance is always an improvement to the



PRETTY WINDOW TREATMENT ON STAIR LANDING; SCRIM STENCILED IN RED AND GREEN FLOWER DESIGN.

treatment of a window of this kind, and the plain cover of the window sets off the pillows in a way that no figured material could have done.

Sometimes a window seat effect can be given by a divan extending from the corner of the room and beneath the window; one of the illustrations shows how this can be accomplished. The same chintz is used for curtains as for the box couch, bringing them into close relationship, thus making an attractive corner and a simple and effective window treatment at a purely nominal cost, for the chintz was only an eighteen-cent domestic one and the couch and curtains were made at home. In a bedroom there is always a scarcity of chairs and extra seating room is worth planning for, especially when it can be combined with a roomy receptacle for clothes.

It often happens that instead of a window seat, the space beneath the window can be used to better advantage if shelving is put there for books; sometimes a bookcase beginning at the corner of the room can be dropped when it reaches the window, allowing for three shelves below the sill and five between the wall.

How often we find the outside appearance of a house has been marred by a careless window treatment; there are so many considerations to be taken into account that it is not surprising that this sometimes happens, and it is well when choosing an architect to decide on one who has achieved a reputation for good window designs and thoughtful placing.

A Bit of Spain Among the California Foot-Hills

Home of Mrs. J. F. Fargo, Hollywood, Cal.

SPAIN has furnished a large slice of inspiration for our architects. There are pseudo — Spanish houses without number in California. Few, however, express the real "feeling," as we so glibly say, of the Moorish type in Spain in a more marked degree than this home located among the foothills of the San Bernardino range, near Hollywood in California. True, one looks in vain for the rugged wildness that would be the inevitable setting for those square Moorish towers and arched loggias in Spain, for the dark groves of ragged cedar and cypress, and the gloomy shade of Manzanita thickets. For though such a setting could be readily duplicated in the San Bernardino, close at hand, the immediate surroundings are more pastoral and practical, while a two-million dollar hotel soon to be erected on the Mount of Olives nearby will still further dispel the charm which attaches to the style itself.

It seems a pity, for the house itself breathes romance in every line. It takes no great stretch of imagination to fancy the sweet song of the bulbul in the rose thickets, or the scarlet gleam of pomegranites among the acacias and the palms. Could anything be more alluring than the overhanging of the small square tower on the right with its conical capping of red tile. Surely, Fatima's chamber is there and from the latticed windows she is striving to see the dust-cloud of her brother's horses. And the quaintly hooded entrance with its charm of broad plain plaster above. It opens upon a stone flagged terrace with enclosing rail-



DETAIL OF MAIN ENTRANCE.

ing of green wood, and from this terrace one steps up two steps upon the higher level of the main porch or loggia, with its arcade of Moorish arches, rose hung and vine wreathed. The arches are repeated in the loggia of the second story, with circular, latticed openings above, which form the windows of the low-ceiled room, 16 feet square, high up in the tower. The second story loggia has been screened for a sleeping porch, and what more charming chamber could be, than these rose hung arches overlooking the wealth of shrubs and palms and flowering plants, many of them very rare, in the grounds below. The pure white of the La Marque rose twines among the rich garlands of the golden Reve d'Or, hanging in graceful clusters and wreathing the walls of cream colored cement, while the dark green of English ivy lends its strengthening note to the red-tiled roof above. The balustrades and trim of the openings are a rich green.



THE OVER-HANG OF THE QUAINT SMALL TOWER ON THE RIGHT.



HAS THE FLAVOR OF OLD CASTILIAN CHARM.

The entrance door opens straight into the heart of the house, the big living room 40x22 feet, extending the full length of the house. Here is a hooded fireplace, and the stairs ascending in the rear. From the dining-room back of the living-room, a pergola leads from French doors, turning at right angles and running to the garage, a distance of 50 feet. Over the pergola, the soft lavender of the Wisteria is interlaced with creamy clematis and the brilliant orange of the Bignonia in a lovely riot of color. A large rose garden filled with many choice varieties, adjoins the pergola. The sweet scented honeysuckle over the rear door fills the air with the fragrance of its straw-colored flowers.

As we wander among all these charms, we feel inclined to forgive the absence of a true Spanish setting for this bit of Moorish architecture, which despite the lack of wild and rugged scenery, has still the flavor of old Castilian charm.



THE PERGOLA LEADING TO GARAGE.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

A House for Two Families

By Nelson Parmelee

ARCHITECTURE is at its best when it properly adorns and meets the exigencies of conditions as they exist. Here is a case in point. Oak Park, a suburb of Chicago, is particularly a home community. Lying close to the city, with fine transportation, the village (20,000 or more inhabitants) is a tempting field for apartment buildings. But apartments are flats in Oak Park, and the municipality discourages them. Apartments do spoil the community spirit. You know less about your neighbor in a flat than in the house next door.

Furthermore, a stone or brick front, flat roofed apartment building is not good architecture when placed in a street and neighborhood of residences mostly of frame construction.

Hence, there has been developed in this suburb a type of apartment building of which the accompanying cut and plans present a typical example. And these plans which give the second floor to one family and the first floor to another will no doubt interest a great many of the smaller towns where building is to be done as an investment, purely for rental.

The plans are self explanatory, but attention is called to the two rooms in the front with the entrance hall between, an unusual arrangement for this class of building and much less formal than usual. The small front room is in this building used as a library, but may be used as an additional or emergency bed room.

The architect also calls attention to the separate entrances, affording absolute privacy and making each tenant responsible for the care of the stairs, walks and entrances. This every renter and owner will appreciate.

As shown, the rear stairs extend from the basement to attic. The entire basement is excavated and ample room is afforded for a laundry and drying room, two vegetable rooms, and one hot water heating plant with necessary coal and ash room. A toilet room is also provided for the convenience of the laundress, or persons at work in the yard.

The attic is floored throughout. Two servants' rooms are installed in the rear, with a bath room conveniently opening from a rear hall. A large, well lighted and well ventilated store room is partitioned off for each apartment.

The library, hall, living room and dining room on each floor are trimmed in red oak and enriched with cornice effects in the library, hall and living room, and a beamed ceiling, buffet, and paneled side wall in the dining room. All of the woodwork mentioned is stained with dark oil stains and finished with one coat of paraffine wax rubbed in and polished.

The remainder of each apartment is trimmed in unselected birch, stained and varnished in the kitchen and its accessories and enameled in bedroom and bath room. The floors in the kitchen, pantry and rear hall are of white maple; the bath and entrance floors are of tile and all other places are of red oak, waxed and polished.

Needless to state, the plumbing throughout is of the most modern type and hot water is provided from a small tank heater in the basement.

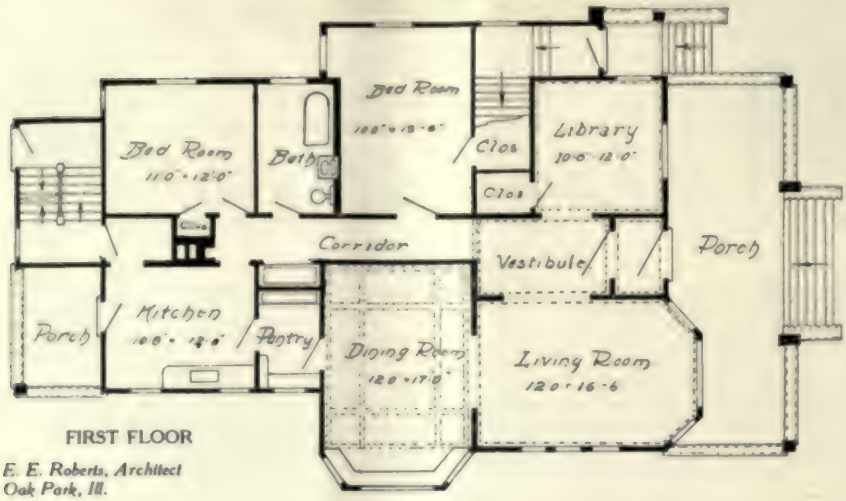
Mr. Roberts, the architect, has made a special study of suburban work and has specialized in the development of cement plaster as a material for exterior work and ornamentation, and in later examples has used cement ornaments with very pleasing results.



A HOUSE FOR TWO FAMILIES.

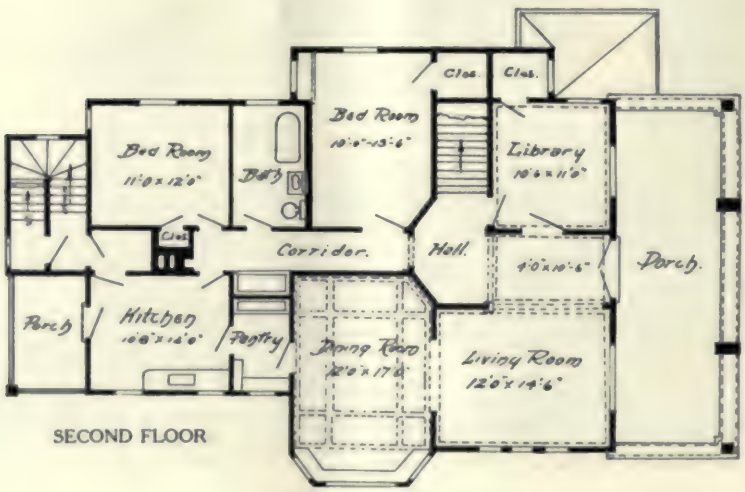
Itemized Cost of House for Two Families

Mason work, including cement floors and walks	$693.00
Carpenter work, including lumber, mill work and sheet metal work	4,015.00



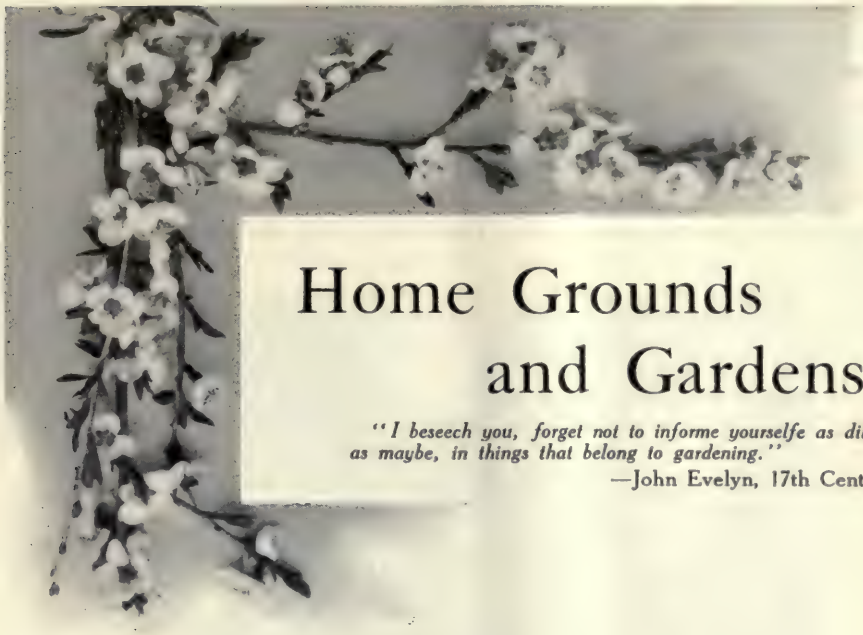
FIRST FLOOR

E. E. Roberts, Architect
Oak Park, Ill.



SECOND FLOOR

Plumbing	586.00	Electric light fixtures	153.17
Lathing and plastering (interior and exterior)	953.50	Grading and landscape gardening	115.00
Painting, glazing and finishing	387.00	Architect's fee (10%)	781.76
Conduit electrical work	140.00		
Hot water heat	715.00	Total	$8,539.43



Home Grounds and Gardens

"I beseech you, forget not to informe yourselfe as diligently as maybe, in things that belong to gardening."
—John Evelyn, 17th Century.

The Apple Tree for Small Grounds

By Charles A. Green

I AM the friend and supporter of every fruit that grows. I can see in every variety of small or large fruit something particularly desirable for the season when it ripens, but if asked to name one fruit more valuable than another I should feel compelled to name the apple.

The apple is a northern fruit. In fact the strawberry, raspberry, currant, gooseberry and pear are all northern fruits. They do not succeed as well in the south as in the north. But the apple is particularly a northern fruit, and yet in selecting the varieties of the apple for sections north of Rochester, N. Y., the question of varieties should be considered.

No fruit has been longer used for food than the apple. No fruit has been known in song and story longer than the apple. Charred apples have been found beneath dwelling places of races long since extinct, dating farther back than history goes.

I am asked to give a list of the varieties of apples which a man may successfully plant on a small place of from one to ten acres. I find great pleasure in having upon my place one tree each of a large number of varieties. In this way only can I become familiar with many varieties, their peculiar growth and productiveness. Some of these varieties are a disappointment to me. They have been highly recommended for other states and territories but they do not succeed very well with me, teaching that with apples as with many other fruits there are special localities where certain varieties thrive better than elsewhere. Thus while the Jonathan in Missouri and many other sections of the middle west is one of the great apples of commerce, with me it is insignificant in size and lacking in color.

The Rome Beauty, while fair in size, with me does not get the fine color which it secures in the west. Ben Davis in my Rochester orchard cannot compare with those grown in Missouri in size, growth and quality.

On the other hand, varieties from the northwest introduced by Peter M. Gideon, of Minnesota, of which I had not expected much, have done wonderfully well in my orchard, and have astonished all beholders with size, beauty and productiveness.

The regrafting of apple trees is an interesting pastime. Charles Downing had one tree which bore fifty varieties of apples through grafting. My friend, Luther Burbank, who is nothing if not beyond the ordinary, has an apple tree which produces 1,200 varieties of apples, there being a graft of different varieties on almost every twig and branch.

I am asked to state how long it would be before these apple trees would bear fruit. Some of them might bear fruit the first year planted. I have seen the Duchess tree bear in the nursery, the tree not being over six feet high, bearing from six to ten beautiful apples. Bismarck and Yellow Transparent bear fruit early. Other varieties might come into bearing in five or six years, while others, like the Spy, might not come into bearing under twenty years after planting.



FOUR-YEAR-OLD BALDWIN APPLE TREE.

While I would select a soil composed of clay, sand and gravel for an apple orchard if I had my choice, I have found the apple succeeding on almost every fer-

tile soil, including that very sandy. More important than the character of the soil is the site or location. I would pay twice the price for an orchard located within three to six miles of a big lake, like Lake Ontario, than for an orchard twelve miles distant from such a lake, knowing that the influence of a large body of water would be helpful. I would pay twice the price for an apple orchard situated on a hillside or hilltop than for an orchard situated in the valley or lowlands.

But where you have only a small plot of land you need not inquire into its adaptability. Go ahead and plant it, making the soil rich enough to bear a good crop of corn, potatoes or wheat. If the soil is naturally wet, put in a tile drain between the rows. If the tile are set directly under the trees the roots will be apt to clog them.

A little pruning should be given each apple tree each year. Severe cutting away of large boughs is injurious, and never occurs with the skillful orchardist. Train the heads of apple trees low. It makes easier picking of fruit, easier spraying and pruning.

The Chimney Corner

By Edw. A. Jackson



HEN mantels are composed entirely of brick or tile, it is desirable to have some metal work to ornament and to protect the facing. For this use, nothing is so successful or so useful as an ornamental hood.

Metal brackets, chandeliers and metal ornaments applied to the face and edges of the chimneys often add to the beauty of the mantels but none of these seem to be quite as pleasing as a metal hood, which comes down over the fireplace opening some six to eight inches and which runs up over the top and sides so as to give a graceful contour against the facings. Most architectural ornaments originated from some structural necessity, and the decorative hood has its inspiration in the fireplace of earlier days, when the hoods were absolutely needed to collect the smoke and to help the draft up the chimney.

In the primitive house, the fire was built in the center of the room, and this bonfire blazed or smoked at its own sweet pleasure, the smoke and much of the heat escaping through a hole in the room. Later, the fire was built against a wall, and the smoke crept up the side of the room to an opening near the rafters. But of course much of the gas and soot covered all the walls and ceiling.

A hood was then designed to hang over the fireplace, this being supported by brackets, or in some cases by columns. This hood was usually of stone, and was of such a height and projection that a group of men could stand around the fire, beneath the hood itself.

This style of fireplace can still be seen in the existing European castles built in the fifteenth century.

The chimney was developed in the following centuries, so that the hood was not so necessary. By chimney is meant the tube or flue that runs from the fireplace to the top of the house, as compared with the previous plan of merely letting the smoke escape through a hole in the wall or ceiling.

The construction of the chimney confined the smoke, secured a strong upward current or "draft," and the fireplace was gradually made smaller, and the hood

ceased to be necessary. Now the tendency is swinging the other way, and the demand for large open fireplaces makes necessary and appropriate the use of hoods, with all their possibilities for decoration.

To the one who has a smoky fireplace because of faulty construction, a hood is the simplest, though not always the best remedy. If the fireplace flue is too small for the fireplace opening, the hood is



THE HOODED FIREPLACE—PRACTICAL AND ORNAMENTAL.

beneficial, as it reduces the size of the fireplace and brings it into proportion to the flue.

A safe rule is to have the cross section of the smoke flue one-twelfth the area of the fireplace opening. Less flue than this will sometimes answer if the chimney is straight and the flue is lined and is therefore smooth.

When the fireplace smokes, one can easily test as to the efficiency of the hood by trying a plain piece of tin, or wood or cardboard at the top of the fireplace. Try the smallest size that will keep in the smoke as, of course, this shield cuts off the beauty of the fire as the blaze and sparks pass into the throat.

While the firelight is cut off by the metal hood, there is little heat lost, as the warmth is quickly radiated by the metal into the room. In fact, the modern English houses frequently have metal hoods running from fireplace up to the top of the mantle, so that the heat from the fire and smoke will be sent into the room and not lost up the chimney. This idea of saving heat from the smoke, by means of the metal hood can well be developed so that the warmth saved will be used to heat a room on the floor above.

When the draft is fairly good, and the fire smokes only at the start before the chimney is warmed, usually a blower, a large flat piece of sheet iron, raised say six inches from the floor by iron feet but otherwise fitting the fireplace snugly on all sides, will correct the draft so that a permanent hood will not be needed. Or the hood itself can be made so as to hang in place only when it may be needed.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 378 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 379 JAMES M. CONVERSE, San Antonio, Texas
B 380 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 381 F. V. FREMMER, Cedar Rapids, Iowa
B 382 JOHN HENRY NEWSON, Cleveland, Ohio
B 383 CHAS. S. SEDGWICK, Minneapolis, Minn.
B 384 E. B. RUST, Los Angeles, Cal.

Design B-378.

THIS design was built in Virginia about two years ago and shows a modification of the Dutch Colonial style. It is frame construction with concrete foundation. The roof and upper section are of shingles, the first story walls may be of shingle, siding or cement plaster as the builder prefers. The porch cornice is extended to form a belt course around the exterior, and together with the slant of the second story walls, is a pleasing part of the design.

The floor plan shows an interesting departure from the usual placement of the dining room, which here adjoins the reception hall in front, with the pantry located at the side instead of between kitchen and dining room, as commonly seen. Space in front of the pantry is worked into an attractive little flower alcove, equipped with bench and shelf. The sideboard opens through into the pantry very conveniently. The placing of the staircase allows a fine front hall which is really another room. The small front chamber on the second floor could be divided into a sewing room and another bath, if desired.

Oak is the finish of the first floor and birch the second, with hardwood floors throughout. There is the usual basement with hot water heat equipment. The cost of the house as built was about $6,000.

Design B-379.

This plaster cottage is designed principally for use in a warm climate and the construction is adapted to such use. The design is for a frame house, using shiplap, building paper, metal lath and cement plaster on the exterior, with shiplap, canvas and paper on the interior. The roof is of shingle dipped in creosote stain. The wood window frames are stained, also the wood bars of the outside screen, divided in the center as shown. The front porch and the pergola have cement floors. A slight Spanish feeling is given by the front entrance and the arched openings upon the balcony. The general dimensions have been kept as small as possible and yet secure a floor plan roomy and convenient. Both living and dining rooms are of good size, with entrance from the hall secured to both bedrooms and bath. Very comfortable rooms may be finished in the attic with storage space. Or the extra space could be fitted into an ideal billiard room with but slight cost. It opens upon a roofed balcony with open sides. Built-in dressers are featured in both bedrooms with built-in buffet in dining room and china cases in kitchen.

Design B-380.

We here show a very handsome cement plaster exterior with unusually well arranged floor plan. As built in Illinois the construction was brick veneer for the first story and cement plaster in the second with half timbered panels in the gables. The half timber work forms part of the window treatment and is a very pleasing feature of the design. The broad, substantial porch with its arched balustrade and the handsome chimney of quoined

brick add distinction to the exterior. Many desirable features are included in the interior plan, which provides a bath on the first floor adjoining the library, which could be used as a bedroom if desired. Here we have again the dining room placed on the front, an arrangement now becoming popular. The five chambers on the second floor are of good size, with good provision made in each for placing the bed.

The house has full basement with concrete walls and a grade entrance. Hot water heat is provided, and there is good storage space in the attic.

The finish of the first floor is intended to be oak or birch with oak floor, second floor pine or poplar, painted or stained. The dimensions are: width, 39 feet; depth, 37 feet 6 inches. Basement height, 7 feet 6 inches. First story, 9 feet 6 inches. Second story, 8 feet 3 inches.

Approximate cost, $5,200.

Design B-381.

This house, in semi-bungalow design, was built in Cedar Rapids, Ia., at a cost of $5,000. There is a full basement under the whole house with heating plant. The floor plan is quite comprehensive, including a bedroom on the first floor, with three chambers and a sleeping porch above.

The exterior is rendered interesting by the four-foot projection of the upper story all around, to balance the slant from grade of the basement walls.

Design B-382.

A very good treatment of a design for a two-family house, giving the appearance of a single dwelling. The grouping of the windows in the bay and gables and the details of the trim give it interest.

The arrangement of the floor plan in first and second stories is practically the same, except the bay on first floor living room, which is offset by a large alcove from second floor living room. The bedroom and bath arrangement is good, they being secluded from the other portions of the apartments.

There are separate heating plants, with good attic and basement space. This house can be built for between $3,500 and $4,500.

Design B-383.

The type of building which we are illustrating is a residence designed for a Canadian city. The exterior is carried up with brick to the line of window sills and above this point it is finished in cement stucco.

The total width of this house is 56 feet 8 inches and total depth 34 feet 8 inches. It is estimated to build this house for $10,000. There is a broad terrace across the front with tile floor and a central porte-cochere entrance.

The arrangement of the room and the general plan throughout is unique At the right of the central hall is a large living room 14 feet 6 inches by 33 feet, with broad fireplace in the center, the chimney projected and showing on the outside. At the left of the hall is the dining room connecting through a spacious pantry with the kitchen in the rear, also connecting with a large screened piazza at the rear that is 16 feet by 17 feet. Above this piazza is a glazed sleeping porch connecting with the second story chambers, and below the piazza is a garage, entered from the rear.

Design B384.

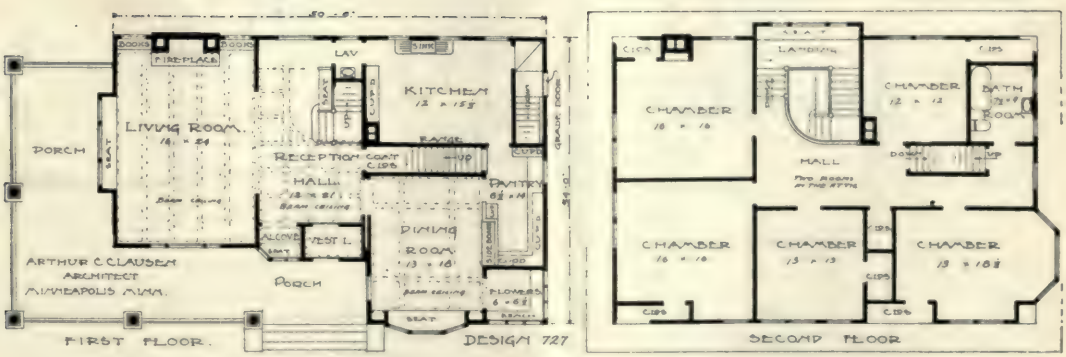
California is the home of the bungalow, and this design was built in the outskirts of Pasadena. An attractive use has been made of clinker brick for the lower half of the porch columns and the chimney in the rear. Attention to detail, has given interest to the exterior, such as the broad, single panel of the front door, with its wrought iron straps for the hinge plates and the novel, cresent shaped glass above. The continuous flower box under the hood in roof is a happy device for breaking up its great length.



A. C. Clausen, Architect.

DESIGN B 378

A House in Semi-Dutch Colonial



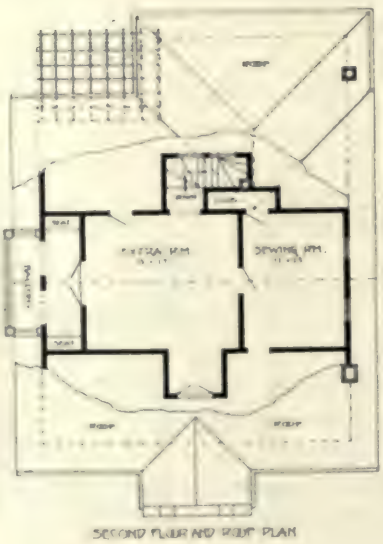


James M. Converse, Architect.

DESIGN B 379

Plaster Cottage Designed for Southern Climate

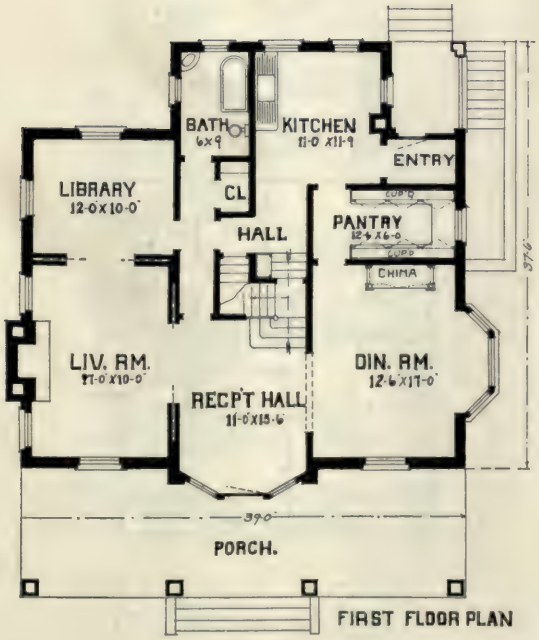




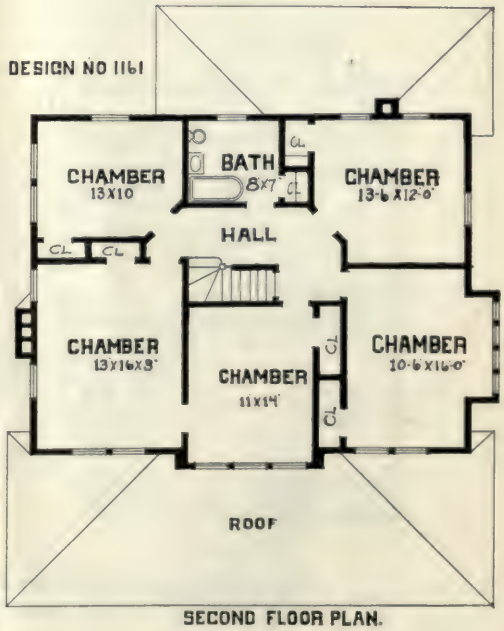


DESIGN B 380

A Cement Exterior of Handsome Appearance



FIRST FLOOR PLAN



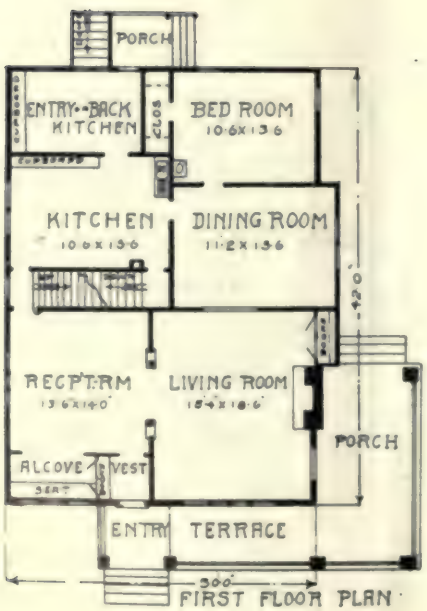
SECOND FLOOR PLAN.

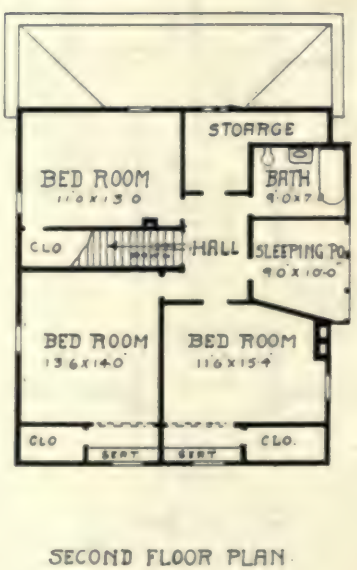


F. V. Fremmer, Architect.

DESIGN B 381

Design in Semi-Bungalow Style



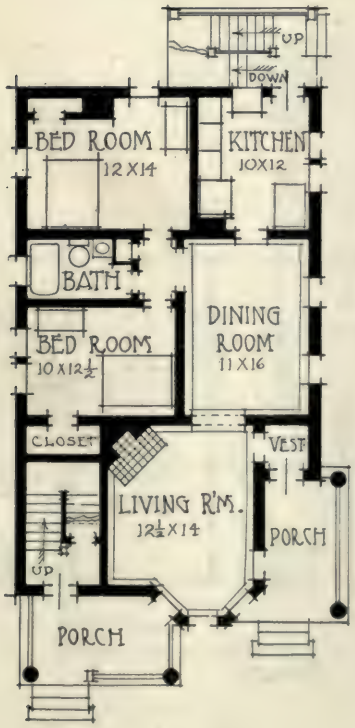


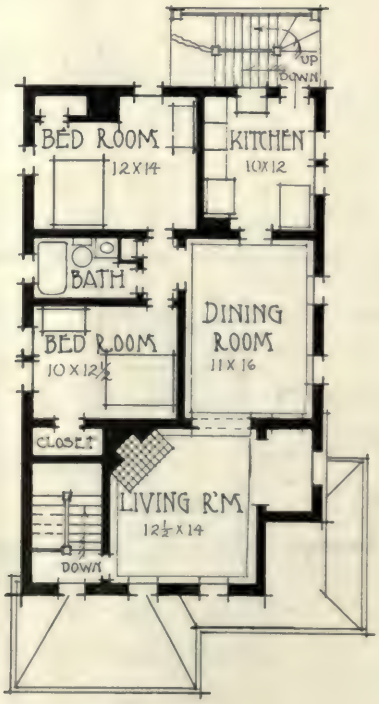


John Henry Newson, Architect.

DESIGN B 382

Design for a Two-Family House







Chas. S. Sedgwick, Architect.

DESIGN B 383

An English Villa



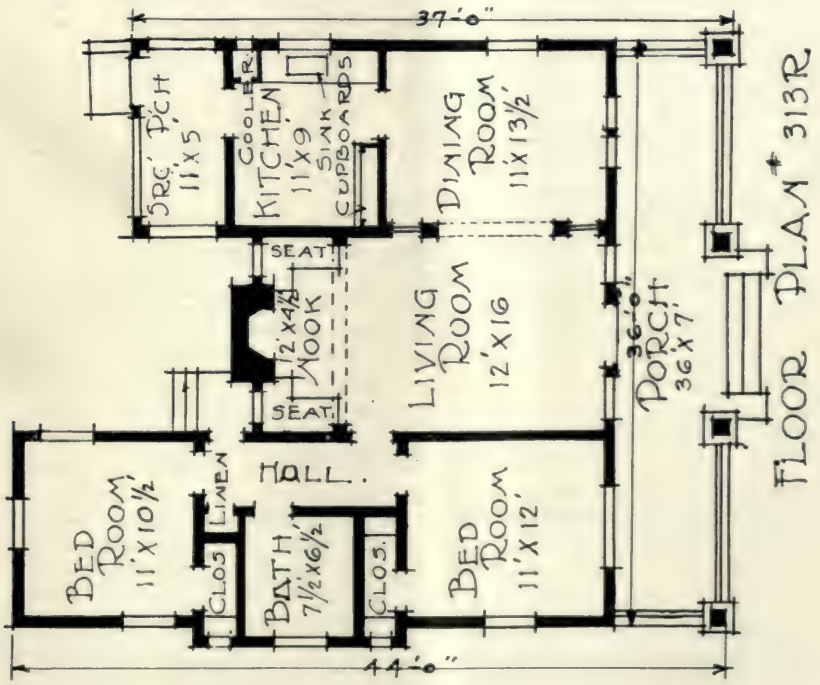




E. B. Rust, Architect.

DESIGN B 384

An Attractive Bungalow Design





Conducted by ELEANOR ALLISON CUMMINS, Decorator, Brooklyn, N. Y.

Holding Your Rooms Together.

THE fashion of having all the rooms of the first floor of a house so connected that for decorative purposes they are practically one, is a modern one and essentially an American one. With such a floor arrangement, the problem is how to hold the rooms together by the choice of a color scheme in which no room shall be inharmonious with the others. The best way to do this is by the choice of the same neutral tint for all the walls of the first floor, having it sufficiently warm in tone for the rooms which have no direct sunshine, using it in the upper halls as well, reserving positive colors for the bedrooms which are isolated by doors.

Of these neutral tints there is quite a choice. There is an extensive range of golden browns, and there is nothing more satisfactory, as they combine admirably with almost everything except the violet shades. A golden brown with the merest suggestion of green is especially good. Then there are tan colors, yellow rather than reddish, and that tone between gray and brown which is called coachman's drab. A dark shade of this applied to a rough wall, or in a rough surfaced paper, is one of the best possible backgrounds for prints and some sorts of bric-a-brac.

One speaks, from force of habit, of the importance of warm tones, but we are beginning to understand that there is beauty in cool tones, that the north room in cool grays and blues may have a delicate and distinctive charm. This being the case, there is no reason why the small house should not have the benefit of the light gray walls, which add so much to apparent size.

But, whether gray, brown or tan, a series of connecting rooms should be in practically the same tone of color, so that the eye is not distracted by abrupt changes. Then each room can have its secondary color scheme, in which some one of the positive colors finds a place.

If with neutral walls and uniform woodwork elsewhere the plan for your house embraces a more or less formal drawing room, with white woodwork and walls and furnishings in delicate colors, something must be done to soften the sharp contrast. This is most easily done with portieres, either double faced or in pairs, and hanging from a pole set just below the door frame. As a matter of fact the formal drawing room is best adapted to the house in which the rooms are definitely separated by doors, and is always a little out of place in the other sort of house.

The Arrangement of Furniture in Adjoining Rooms.

Too many people arrange furniture only with reference to the room in which it is placed, without thinking of its appearance from the next room, which is a loss to both rooms. It does not matter so much when the connection is by a single door, but is of great importance in the double parlors separated by sliding doors so common in city houses. With these rooms it is desirable to differentiate them as much as possible. They are more easily managed when of the same size and nearly square. Then one room can focus around a central table, in the other the furniture be arranged around the walls. But never duplicate center tables in adjoining rooms.

Too often the front room is abnor-

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mally long. The salvation of such a room is a grand piano with its keyboard to the windows and filling the best part of the front half of the room. Then a small couch or a group of chairs can be placed in the angle of the piano and the remainder of the room is practically reduced to a square. If a sofa is placed in such a room it should be set at an angle with the wall and not repeat the long line of the piano. Far better relegate it to the rear room and have in its place one of the high backed, winged arm chairs and a short settee on the Chippendale order.

Furniture of Varying Heights.

You can never furnish a room effectively with pieces of nearly uniform height. Even tables should vary in elevation. You want one height for writing, another for bric-a-brac, still another for the small table which holds a lamp at the head of a couch, and the greater the variety the pleasanter the impression. A tall cabinet of some sort does wonders for a room. After many years, the writer recalls with pleasure an extremely simple room, with little in it but low bookcases and a few chairs, with a tall mahogany secretary between two windows, with some good china behind its glass doors and a vase of pink cosmos standing on its dropped flap. No modern desk is half so comfortable or convenient, or has half the charm of the old-fashioned secretary, and a very good one may be had for no great sum if one knows where to look and understands the resources of the man who "does over" old furniture.

The Value of Heavy Curtains.

People always say that lace curtains "furnish so." Perhaps, but they are not in it with heavy curtains, hanging straight to the floor, with or without a valance. When the woodwork of a room is of poor design, the heavy curtain disguises it effectively. When it is good in style and color a well hung curtain will set it off cleverly. You can tone up a negative looking room wonderfully with curtains of plain color in one of the tones of the carpet or of the furniture covering. Many of the furniture tapestries and brocades seem a little conspicuous for their original purpose, but are most effective for hangings. So, too, with many of the cretonnes and printed linens. Expense is another factor, as not very much material is required for a straight hanging well pushed back.

The making of a heavy curtain at home is a distinct saving, as you will discover by figuring out the items of the upholsterer's estimate. Little skill is required beyond careful measurements and getting exact right angles at the corners. As for the workmanship it is easy to improve on the upholsterer, who does everything by machine and never presses edges. A detail which improves the look of the curtain is attaching it to the rings by small sewed on "drapery hooks" instead of safetypins. Never pleat a curtain before attaching it to the rings.

In choosing patterned curtains, care must be taken to have them either less or more striking than the other figured material in the room. If the pattern of the curtain is large, the furniture coverings and carpet should be either plain or nearly so. On the other hand, curtains of block printed chintz require the foil of strong color and bold design elsewhere in the room.

Some of the best looking curtains are made by choosing a plain fabric and bordering it with the stripes of a printed one, or else using the tapestry or cretonne borders, which are finished on either edge. For such curtains, in any but very fine houses, heavy, double width colored linens are admirable, with the border set directly on the edge, and a finish of an openwork gimp. Their cost is from seventy-five cents to a dollar and a quarter a yard, and one width is enough for the two halves of the curtain.

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Block printing is as easily done as stenciling, and its effect in detail is much better, as the spaces of the design are so much smaller. It is eminently satisfactory for small articles, cushion covers, borders and short curtains. The various raw silk fabrics, pongee, tussah, rajah and other Oriental silks are excellent grounds, and it is greatly improved by a run outline of silk surround-

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ing the forms of the design. A single design can be varied almost endlessly by the use of different combinations of color for the printing and by the choice of the outlining thread. A study of the French block printed chintzes will give one good ideas for combinations of color.

Doors, Open or Closed.

Most rooms have more doors than they need, and even when they are conveniently located and good looking they are something of a problem.

When a door is kept closed all the time it is easy enough to treat it as a part of the wall space and hang pictures or draperies against it. The writer recalls a door between the end of a grand piano and a low bureau, with elaborate brasses, used for holding music. At the top of the door hangs a good-sized print framed in much the same tone as the door. Below this is a square of Oriental embroidery in dull blues and pinks and golden brown whose lower edge meets the top of a large architectural photograph standing on the floor. The arrangement is admirable in color and gives interest to an otherwise dull corner. The closed door, which must be opened occasionally, is a good place for the display of some fine Oriental rug, of small size, which seems a little too delicate for the floor, or for one of the bits of embroidery or tapestry which the European traveler is apt to bring home. A wrought brass tray, or one of the South Kensington reproductions of old brasses or silver is a good thing to hang against a door, as is one of the big copper trays that the devotee of Arts and Crafts delights in. None of these things interfere with the opening of the door in case of need.

When a door is kept open permanently there seems to be no good reason why it should not be treated as a part of the structure of the room and furniture be set against it. At the present moment the writer faces a large single door which has been adjusted at such an angle that it screens the light from the head of a nearby couch. Standing against it is a small mahogany table with drawers and leaves, on which are an Oriental cabinet of inlaid wood, a kaga candlestick in red and gold and a vase of the same ware, generally filled with scarlet and white flowers. On the floor at one side of the table is a Japanese jar in red and blue and on the upper part of the door hangs a photograph in brown tones of one of Rembrandt's heads. The whole effect is extremely good.

This door is stained a brown tone. Against a white painted door stands a round mahogany card table, with its half raised and resting against the door. Here are silver candlesticks, a blue and white china bowl and the picture is a water-color of flowers, a mass of blue and pink larkspur.

White Oriental Lamps.

So many of the Japanese lamps and lampshades are mere parodies of Occidental work that it is a pleasure to come across something which is the product of the native taste. One feels quite sure that a lamp of ivory white porcelain with the typical Geisha shade all spotless white, except for its lacquered ribs originated with a Japanese who had not come in contact with modern ideals. A similar lamp, which might approve itself to the common taste better, has a bowl of tan colored porcelain and a shade of grass cloth of the same tone, with brown ribs. It is shown in close association with fabrics in dull blue and golden brown. Lamps with these pale tinted shades light a room far better than those with high colors and large patterns. Occasionally one finds an exquisite Geisha shade in white and pale gray tones, just redeemed from insignificance by the black ribs.

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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

For Ceiled Walls.

J. T. H.—"Would like to have you send me color scheme for walls, rugs, curtains and furniture in summer home.

Referring to living room with Southeast exposure, which was originally 10x20 feet and which we are extending to 20x20 feet as shown on sketch. This room is to be used as diningroom also. It is finished in pine ceiling and stained soft brown. It will have beamed ceiling. Do you think brown stain will be too somber? It has large common red brick fireplace which we want to color to harmonize with the surroundings. Would like idea of window arrangement.

Had thought four windows, as shown on sketch, overlooking lake, advisable but do not know what to do for window on South exposure, outlook of which is very pretty."

Ans.—We would paint the exterior of the cottage light brown, cream trim and green roof. Porch floor light yellowish brown. The brown stain of the ceiled walls of livingroom will need much relief in the remaining treatment. The spaces between the ceiling beams should be painted cream color. The red brick should stay as it is. You cannot paint rough, red brick satisfactorily.

We advise making the large single window on the south, into French doors, with French doors to correspond opposite, opening on porch. These should be painted white, also all other window sash. A group of three mullioned windows on the lake side, high enough to allow of a rustic settee under them, would then give you a well balanced room as to openings and enough light to overcome the brown walls.

As to floors, a hard pine floor answers very well for such a cottage; it can be filled, stained and waxed or varnished, same as hard wood. Do not think of using several small cheap rugs on the floor of such a room. They are never in place and unsuitable. They are fit only for bedrooms. You can get two summer rugs of the green woven wire grass or some of the porch Crex rugs.

Paint your table and benches a warm medium green, also the wicker chair and the Morris chair. Upholster them with a cretonne in strong, rich colors, red and green predominating. Put the benches each side of the fireplace and cushions of red Colonial denim. Make your window curtains of cream cheese cloth and draw them back with little red cord and tassels.

Use the brown linoleum on the bedroom floors on the old kitchen floor. Paint the wall up four feet, brown, and the wall above the ceiling, deep cream. Put your new maple floors in the bedrooms, with two pretty rag rugs on each and do all you can to overcome the ceiled walls, by dainty curtains and beds.

The wall board of the attic bedroom can be painted any desired color and decorated.

A Brown Oak Finish.

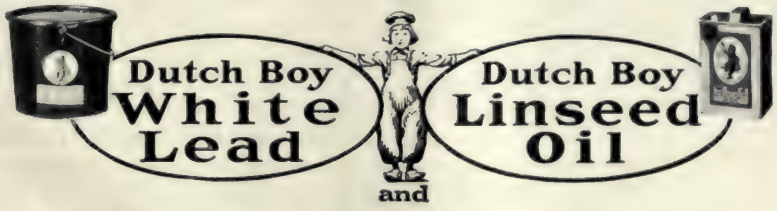
A. B. B.—"My husband and daughter object to brown oak finish. Can you suggest a color scheme for both wood work and walls, especially for the living- and diningrooms. The objection to oak finish is founded not only on the dark disagreeable color itself, but because it has become so conventional in this neighborhood."

Ans.—You are not at all limited to a brown finish. People choose that largely because they have miscellaneous finishings and it is the best harmonizer for a lot of different things. For the two



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rooms you mention, a bog green stain would be attractive and it has a bungalow character. Some regard must be paid to that, a mahogany finish for instance, is not appropriate to a bungalow, although some people use it. It is only allowable in a bungalow if the furniture be old mahogany odds and ends in a dark, dull finish and then the woodwork must be dull and dark also.

Another finish you could use would be a silver grey stain. This is not at all as its name would imply, a light colored finish; it looks more like oxidized silver. Much depends on the character of your furniture and rugs. If the furniture is oak, then we advise the bog green stain, which is green with brown shades in it, brought out by the grain of the wood. If you happen to have old mahogany, it would be in tune with the silver grey stain. There are several manufacturers of these stains. Send for their samples and see which you prefer.

Wall Treatment for Heavy Furniture.

H. L. H.—"Enclosed are crude plans of my house which I submit to you for help in decorating and furnishing.

"The woodwork below is the S.-W. Early English finish; wood, chestnut; floors, oak in a natural finish; fire place, a red brick with a plain dark wood shelf on top.

"The livingroom has a beamed ceiling. The rug is a Whittals Anglo Persian rug in a Bokhara design and the two small rugs are the same. Davenport fumed oak and tan leather cushion, a rocking chair in black leather, rest of furniture in fumed oak. Piano is a Hungarian walnut, curtains cream net. Diningroom has a five-foot paneling finished with a plate rail, a dull brass dome with green and white art-glass shade, dark green Kalliston rug with a darker green border, net curtains in cream, furniture Early English. A few old dishes in dark blues.

"Would portieres be suitable between the two rooms, of silk velour, the diningroom side of dark green and the side toward the livingroom a dark rose to blend in with the rug? If not, suggest.

"Would you suggest silk over-curtains for these rooms?

"I also have a large brass jardiniere in Egyptian design and old brass andirons and candlesticks (heirlooms) for the fireplace; walls of the lower floor, hall and bathrooms are white Alabastine, no stenciling. The radiators are all painted a dull black and electric fixtures are all on the square design and shades of frosted glass except where designated different."

Ans.—First let us say that the main trouble with your interior, is the treatment you have given the walls. Your furnishings are good—even handsome, but they are heavy, severe and bear no relation to each other. Your white walls are the worst possible setting for such furnishings as you describe. Over-draperies and windows of green velour, would not help, only intensify the discord and severe contrast. Were it not that red is a trying color for a livingroom, we should advise you to keep your white ceiling between the beams and use paper on this wall and stairway in a self-toned design of soft shaded reds. This would harmonize with your red Bokhara rug, red brick, tan and black leather and gold picture frames. Then with portieres of dull old red in opening and your brasses, you would have a room of cheer and warmth, as a N. W. room should be.

Another great blemish is the black radiator, remove that finish and bronze it. We would change the hall lantern for something in pierced brass, get rid of the green and white. No over-draperies at the stair window, let it be as inconspicuous as possible.

The diningroom could be made very attractive, but the green and white is all wrong for a N. E. room. Do over the wall above wainscot with Flat-Tone Old Gold, and the ceiling the same. Have a decorative frieze, fall leaves. Get a yellow dome, instead of the green and white and line the red portieres with green and blue and dull yellow cretonne. Cushion the window seat with the same cretonne. You won't know your room, it will be so pretty.

We can only touch on the upper floor; the wall tones of the den should be much stronger, dull brownish orange instead of buff and ceiling dull yellow. The scrim curtains might be stenciled in browns and yellows, the seat cushions



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warm golden brown. Keep the room in browns and yellows. The azure wall of S. E. bedroom is very trying. You must soften it with window draperies of cretonne in pastel blues, rose and dull greens, using same for bedspread and furniture covers. The N. E. room for mahogany would be delightful with soft pale tan walls, bordered all around with decorative band in darker tan, dull pink and green, dull pink at windows and rug in deep shaded old pink.

Floors and Woodwork.

L. M. T.—"I am going to build a new house this summer like the enclosed plans and I want to ask your advice about the interior finish; shall build facing the east. I want to finish the first floor in oak, with oak floors in main rooms and hall, maple floors in pantry and kitchen, five cross-panel doors of quarter-sawed oak will be used. On the second floor want to use oak finish, maple floors and the same kind of doors, etc."

Ans.—We should advise a fumed brown stain on the woodwork of hall and den, including stair. If the natural oak is preferred for living- and diningrooms, the finish would be shellaced and varnished, then rubbed. Keith's Magazine will give you information on all these points. The oak floors in the rooms with natural finish should be left natural also; in the hall and den we should stain them slightly. In regard to color scheme for walls, etc., such a scheme should consider the furnishings. As we have no information concerning these, it is impossible to advise. In a general way, it is better to use dull blue or greyish green with light oak woodwork, than browns.

Concerning your proposed plan of the same light oak finish for second floor, we think it would be unfortunate. Nothing is harder to deal with by the decorator than a natural oak finish. No furniture will harmonize with it except the light oak and the effect of all those heavy five panel oak doors would be severe and ugly. There could be none of the grace or daintiness of furnishing which is desirable in sleeping rooms. The oak finish might be used in the owner's room, but we should advise white painted pine on the balance of the second floor.

Regarding the difference of cost in using hardwood or a soft wood finish, would say that here in Minneapolis we find that today there is not anywhere near the difference in the cost of these woods as heretofore. This is owing to the fact that good quality of white pine commands a very high price. Either birch or oak is quite plentiful and where millwork is run special to order, the mill will charge very close to the same price for turning interior finish in good quality and white pine, as they would for birch. Oak finish will cost a little more than birch. I think in the long run that birch finish is the most desirable where economy is particularly desired. Maple is a good choice for the second floor.

A Bungalow Living Room.

E. S. C.—"We are building a story and a half bungalow and would like your valuable ideas as how to paper, finish, and carpet the livingroom."

Ans.—Following out the line of treatment indicated by your letter, we suggest either a soft, dull green burlap for the wall, or one of the tone and tone papers in a small all-over design in dull greens having almost the effect of a plain wall.

We would suggest a Doone art rug, showing a center of dull greenish grey with a conventionalized floral border about 18 inches deep, in green and dull red. This rug would suit the bungalow character of the room excellently and the wicker furnishings. The latter we would prefer unstained, in the natural wicker, but would upholster with an American imitation of an English cretonne at 50 cents a yard, showing strong, but not glaring shaded greens and reds in a very close pattern on a white ground. The design covers so closely, that very little of the ground is visible. The same cretonne should be used for side draperies over plain white scrim, at the windows.

This would give you a very delightful bungalow livingroom; a finishing touch would be one of the electric reading lamps with a wicker-covered standard and wicker shade lined with gay cretonne.



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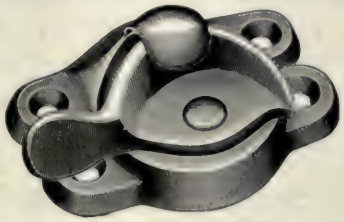
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ANSWERS TO QUESTIONS—Continued

Rugs for Living- and Diningrooms.

E. C. W.—"All woodwork in hall, livingroom and diningroom is red oak stained to weathered oak shade. Hall has northwest exposure and is well lighted, with oriel window and ordinary window. We have planned having all of these rooms tinted in buffs, tans and browns, white ceiling—no break in any wall except in diningroom, with plate rail. What would you suggest? For rug we plan on having mixed green and brown centers with greyed green borders (all small rugs, largest 9x6), with weathered oak finish and furniture in all of these rooms, reddish brown brick for fireplace, will the effect be too somber? What would you suggest for color for window shades? Exterior of house is red brick veneer with natural stucco on second story. What for window and sash and trim inside and out? Need casement windows in livingroom and diningroom be curtained?"

Ans.—We advise tinting hall an old gold color with ecru ceiling; livingroom a soft tan or ecru, with lighter shade of same on ceiling. Diningroom rich shade of dull blue below plate rail with pale green wall above, ceiling same. Plate rail should be set high on line with top of doors.

We are very much opposed to small rugs in living- and diningrooms. They are never in place. We should certainly advise one large rug in livingroom. A Saxony made to order 9x14 feet wide would cost about $35.00 and be worth a dozen small rugs. We should choose brown and green for this rug. We would have diningroom rug a body brussels, size 8-3 by 10-6 about $25.00 in blues and greens mixed. For hall a small Shawmut rug 7x9 feet, $25.00, in golden browns, would be ideal.

Do not have colored shades for electric lights unless they are the fine Tiffany glass. If this cannot be afforded get plain ground glass. If there is to be a dome in diningroom, that might be a pale green and blue.

The shades should be reddish brown outside and cream inside with reddish brown trim.

The casement windows need thin scrim or net drawn on small rods, top and bottom, the rods placed on the sash. Samples of wall tints, curtain materials, will be furnished for 50 cents. Rugs to match and harmonize sent on approval if charges are paid both ways.

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The School Child's Nutrition.

THE November number of Keith's Magazine reaches our readers just as the children are getthe full swing of another year's work. Never in the annals of education was school work so inexorable in its demands as it is now in these times of transition with their continual pressure of new methods and their constant enlargement of the scope of education by the addition of new subjects. This being the case, is it not worth while to consider whether the children upon whom this heavy strain is placed are adequately nourished.

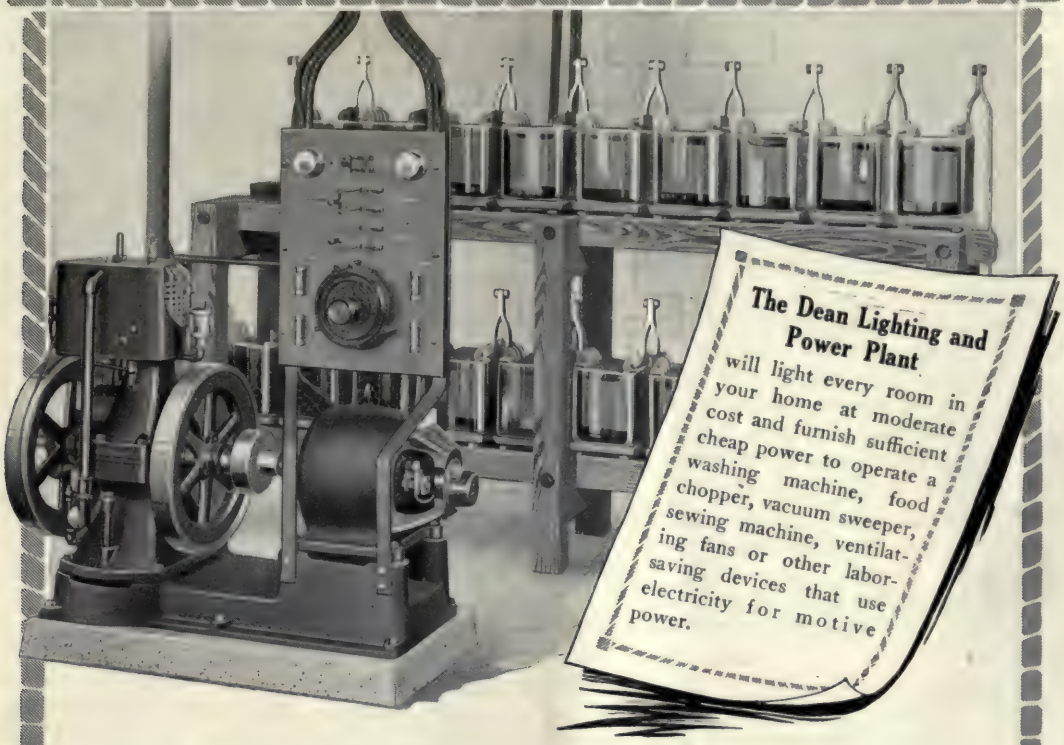
Adequate nutrition is one thing for an adult and another for a child. In an adult the processes of waste and repair are in equilibrium. All that is necessary is to balance the outgo of tissue by sufficient nutriment to repair the waste. With a child tissue waste and body-building go on side by side. The needs of both processes must be supplied.

Just here is a danger. We hear a great deal, much of it true, about the excessive consumption of food. Much criticism of this sort is just. As a rule, Americans of the more prosperous classes are over-fed. Those whose circumstances enable them to lead a leisurely life eat too much and exercise too little. Witness the increasingly generous proportions of many of our women. But very few children eat too much. Even the excessive craving for sweets is a symptom of a real physical need.

The problem in feeding the child is to achieve a diet of all around nutritive value. He must have meat, of course, in moderate quantity, but he must not depend upon this alone for energy and tissue building. Cereals should form a large part of his diet, with abundance of vegetable fats. Few children will eat fat meat, but butter is a good substitute and the vegetable fats are available in the form of olive oil and various cheaper forms, such as peanut and cotton seed.

Highly concentrated foods, which make great demands upon the digestive organs are not for children. Nor is the child likely to feel sufficient enthusiasm to Fletcherize his food. He must eat and the process should be made as easy as possible. For this reason a well cooked cereal with plenty of milk and sugar is a better breakfast for him than its equivalent in whole wheat bread. Theoretical modes of feeding may be excellent for the adult, but they require, like most other cults, an exercise of the will which is not to be expected of a child. Give him plenty of palatable food, well cooked and easy to eat, and you need have no fears for the result.

As various forms of carbohydrates must form a large part of the child's food, it is important to ascertain what sorts of cereals and flours are richest in nutritive elements. Of cereals nothing is any better, if so good, as old fashioned oatmeal, not rolled oats, and not steamed cooked. Such is the vogue of the easy way that it is not always possible to get real oatmeal, but if the grocer does not have it it can always be had at a feed store. Cooked slowly for several hours, on the back of the range, or in a fireless cooker, it is a delightful contrast to the



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insipid cereals ordinarily served. If you want a practical illustration of the nutritive value of the real thing in the way of oatmeal you have only to consider the splendid showing, mentally and physically of the Scotch nation, whose staple food it has always been.

Another nutritious breakfast food is made from whole wheat meal. Dr. Wiley gets whole wheat and grinds it himself in a coffee mill, cooking it slowly for at least five hours. The flavor is different from oatmeal, the nutritive value as great. The expense of oatmeal porridge and of whole wheat mush is much less than that of the steam cooked cereals, a consideration of importance in these days of high prices.

Either the wheat meal or the oatmeal can be made the basis of quite a variety of warm breads, cakes and puddings, whose nutritive value is far greater than if they were made from ordinary white flour.

Children are like old people in one respect. They need food often. The writer happens to know of two kindergartens drawing their scholars from the same neighborhood and from the same class. In one of them a lunch of crackers and milk is given in the middle of the morning session, and the improved appearance of its pupils, as compared with those who do not have a lunch, is very noticeable. For older children a lunch in mid-forenoon is seldom practicable, but they should be encouraged to eat as soon as they get home from school in the afternoon. It is worth while spending a few minutes every day to insure a provision of wholesome food ready for three o'clock.

What Shall Be the Dinner Hour?

Theoretically the child, who must go to bed early, ought to dine at noon. Practically in places where the custom is to dine at night, a custom undeniably beneficial to the adult part of the family, either the child must dine at night or two dinners must be cooked, a state of affairs at once troublesome and expensive. The happiest solution is a compromise, to give the child enough substantial food during the day to break the force of his appetite and to set the dinner hour not later than six o'clock, so as to allow a sufficient interval for digestion before bed time. After all such things are very much matters of habit, and many people have dined at night all their conscious lives without the slightest injury.

If a child must have his dinner at night, his school work ought to be so planned that he need not study in the evening. Better far that he should put in an hour's work in the morning. The hour or two after the night dinner should be devoted to reading, to games, to handicraft or merely to conversation, all of which are helps to digestion. It goes without saying that the menu, when children share the night dinner, should be a simple one. Reserve the elaborate dishes at your command for festive occasions or for the midday meal on Sunday. It is quite likely that the adults of the family will be none the worse off.



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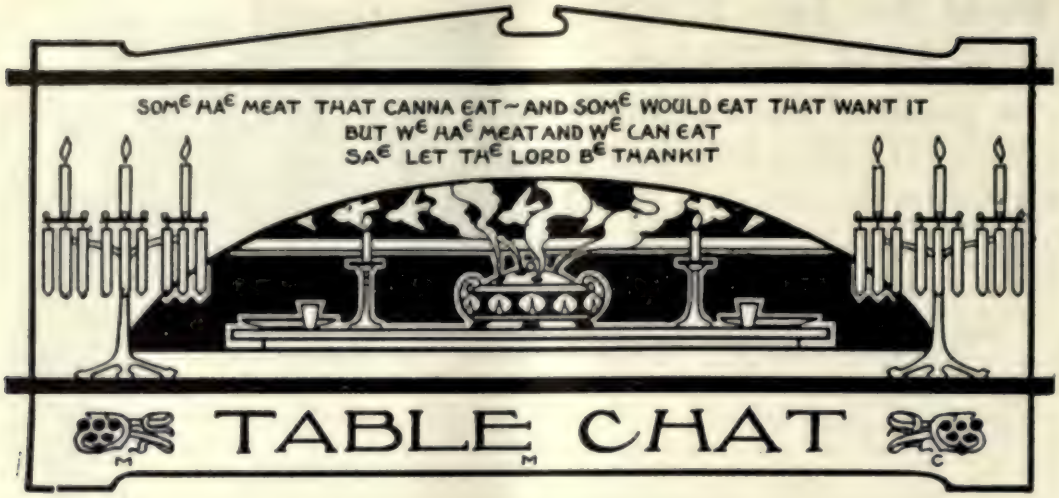
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Potatoes in Divers Guise

By Beatrice d'Emo

THE expression "She does not know enough to boil a potato" is usually applied to some one altogether ignorant in culinary matters, but in point of fact many people who call themselves good cooks have not arrived at that knowledge. To boil a potato so that it comes to the table a snowy, feathery-looking ball, ready to break apart at the touch of the fork, implies considerable wisdom in matters domestic; also the potato itself must be good, not too young, if it is desired mealy, and not throwing out sprouts, for in the latter state the starch of which the potato is largely composed has commenced to change to sugar, and as it is the starch expanding during cooking which causes the tuber to grow light, it will be readily understood when this element disappears to a considerable degree no form of cooking will make the potato mealy, hence sprouted potatoes, if they must be used, should be mashed, made into croquettes, salad, soup, or used in some way when seasoning will conceal the sweetish taste which comes when the sugar replaces the starch.

To boil a potato to perfection peel, if old, and scoop out the eyes with the point of the knife, then soak in cold water for an hour. If the potatoes are new, wash and rub with a stiff brush, then scrape off whatever skin remains but do not soak. For either, have the water boiling and slightly salted, but after putting the potatoes in do not boil fiercely, but keep just at the bubbling point for thirty minutes—small potatoes will cook in twenty minutes—then drain off the water, sprinkle with salt and cover closely, setting the pot at the back of the stove for three or four minutes, giving it a little shake once or twice. Serve at the end of that time, for no potato will remain feathery if allowed to stand any time after it is done.

Boiled and baked potatoes leave the seasoning to be done at table, and the simplest form of potato flavored while cooking is when the tuber is mashed after being boiled, then milk, or preferably cream, butter, salt and pepper added.

Potato Cassolettes are a kind of stuffed croquette, and are suitable for an entree or a luncheon dish. Prepare sufficient mashed potatoes to make one and one-half pounds in weight, or about three coffee-cupfuls. Melt two tablespoonfuls of butter in a saucepan and add the potatoes, which must be freshly mashed, stirring until very hot, when put in a tablespoonful of cream, a teaspoonful of chopped parsley, salt and white pepper to taste, and last of all the well beaten yolks of two eggs. Stir until the eggs are set, then remove from the fire and allow



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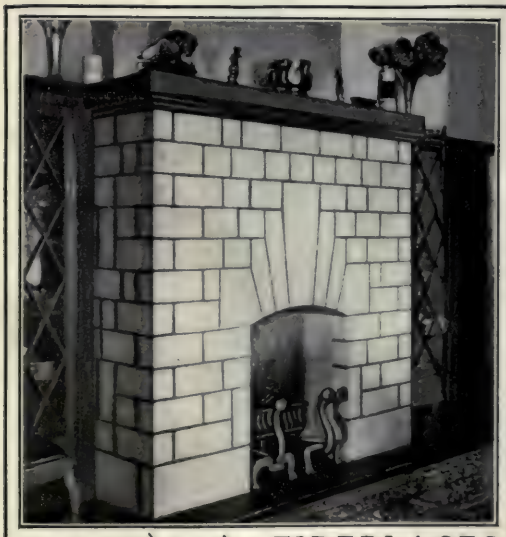
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Brenlin Unfilled—the original Brenlin—should always be used where length of service and attractive appearance are first considerations. For this shade is made of closely woven cloth without the "filling" that cracks and falls out in unsightly streaks and "pin holes." Sun won't fade it nor water spot it. It is supple—not stiff, yet always hangs straight and smooth—and *really shades*. Made in many artistic tones. For windows 1 yard wide x 2 yards long, 75c. Special sizes and Brenlin Duplex—white one side, dark the other—made to order at proportionate prices.

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If no dealer in your town can supply Brenlin, write us and we will supply you direct. We satisfactorily fill hundreds of orders by mail every year.

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It shows actual samples of Brenlin in all colors, and gives many helpful suggestions for the artistic treatment of your windows. With it we will send you the name of the Brenlin dealer in your town. CHAS. W. BRENEMAN & CO., 2066-2076 Reading Road, Cincinnati, O.

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to cool. Make into balls about the size of a child's fist and flatten the top.

Sweet potato souffle is a sweet dish to be served as a dessert. It is very delicate if eaten as soon as baked. Melt three tablespoonfuls of butter in a very clean fryingpan. Do not let it cook long enough to grow dark, but as soon as it is liquid stir into it three tablespoonfuls of flour; rub smooth, then add half a cupful of hot milk and half a cupful of mashed sweet potato. Stir with the fork until all is smooth and thick, then take from the fire and stir in three tablespoonfuls of granulated sugar, a pinch of salt, powdered cinnamon or nutmeg to taste, the beaten yolks of three eggs and, last of all, fold in the whites of the eggs which have been whipped to a froth. Bake in a deep pudding dish for twenty minutes in a medium oven and serve at once with a sauce made by cooking together a cupful of sugar with half a cupful of water until quite thick, then add three tablespoonfuls of sherry, if there is no objection, and a teaspoonful of lemon juice. Another sauce which goes excellently with the souffle is simply rich cream made very sweet with powdered sugar and flavored with either grated lemon peel or nutmeg.



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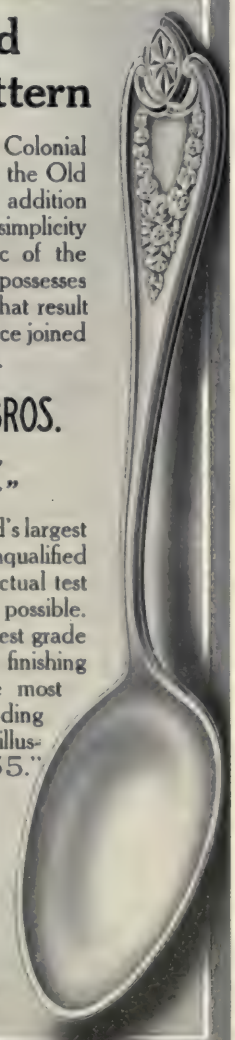
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Comparative Cost of Frame and Non-Combustible Materials.

SOME very interesting figures on the comparative cost of frame and brick dwelling houses are presented in the recent report of the Committee on Fire Protection of the Chamber of Commerce of the city of Boston. The conclusion of the committee was that the slightly greater cost of brick, which averaged a little less than 10 per cent more than frame construction, was fully offset in a few years by the reduced cost of maintenance and insurance, as well as by the greater comfort and durability of the house. The report states that when lumber was cheap and brick more expensive than it is at the present day, the idea became general that the cost of brick as compared with frame was almost prohibitive and this continues, although the conditions have changed so radically that the cost is now but little more, while the ultimate cost is less.

The purpose of the investigation was to encourage the use of brick and non-combustible interior construction for the purposes of fire protection, and this form of building was very strongly urged by the report. Bona fide bids were secured from five different contractors of good reputation on the cost of the construction of dwellings of brick, wood, cement and hollow blocks, the houses to be the same in every particular except the outer walls. Bids were secured on a modern, eight-room house, of good design and excellent arrangement, such as is frequently built in and about large cities, and on these the bids of the five contractors varied comparatively little, and so the average was taken as a fair test of the practical cost, the contractors including their profits in all cases. The average paid for the various types was as follows, the second column showing the percentage of excess cost of each type over the clapboard type:

Clapboard	$6,759.95	.0
Shingle	6,868.80	1.6
10-inch brick wall, hollow.	7,372.48	9.1
12-inch brick wall, solid..	7,641.00	13.0
Stucco on hollow block..	7,187.65	6.3
Brick veneer on hollow block	7,483.16	10.7
Stucco on frame	6,952.90	2.9
Brick veneer on boarding.	7,226.44	6.9
Brick veneer on studding.	7,153.98	5.8

Concrete Problems from Cement Age.

Question.—We have a reinforced concrete floor on top of a wooden floor with two layers of tar paper under it. The top coat is 1½-inch thick of a mixture of 1 part cement to 2 parts sand. Some of the surface three weeks old is still soft and it is easy to scrape off the top to a depth of ¼-inch. My foreman thinks it was finished too wet. What do you believe is the trouble? C., Minnesota.

Ans.—We should like to have you supply more information as to the concrete floor which has proved a failure. From the information you give us, any one of several things may have caused the trouble. A snap judgment would be that the cement is dead or it certainly should have set up in three weeks. Too much water might have something to do with a temporary retarding of the setting, but in the length of time which you mention, the excess of water should have disappeared, and even this should have a tendency to make the concrete stronger, as it aids in the crystallization of cement. Then again, the soft concrete may be due to the fact that the sand which you used was very dirty. If it contained a great deal of loam or other soft mate-



Artist's Drawing of the Residence of W. F. Harrah, Niles, Michigan. Roofed with Asbestos "Century" Shingles by H. A. Newman, Chicago, Architect, and Grand Rapids Sheet Metal and Roofing Company, Grand Rapids, Michigan, Roofing Contractors.

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These Veneered Red Shingles have an Indian Red weather surface backed up with gray composition. They are made of the "Century" asbestos-cement composition, by the famous "Century" process. Strong, fireproof, permanent—never need painting or repairs.

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rial, or fine dust, this would prevent the binding qualities of the cement getting in their work. Again temperature may be at the bottom of the matter.

A Green Color to Concrete.

Question.—I should like information as to a mineral color which will impart a green shade to concrete, the color to be mixed with the concrete and not applied after the concrete has set. Do you know of any green color which can be used in this way and which will give a permanent color? J., Illinois.

Ans.—Decided greens are something of a problem in cement work, used as you propose. Green color can be obtained in concrete, but a permanent green cannot be had at any where near so low a price as other colors. A mixture of Prussian blue and chrome yellow will give you a green, but whether or not it will give you a strong enough green when used in quantities that may be safely used without threatening the strength of the concrete, is a question. Most of the green colors are not stable when mixed with cement. A chromium oxide undoubtedly may be used with good results, but we think it cannot be used to any great extent for the purely commercial reason that it is not a common color.

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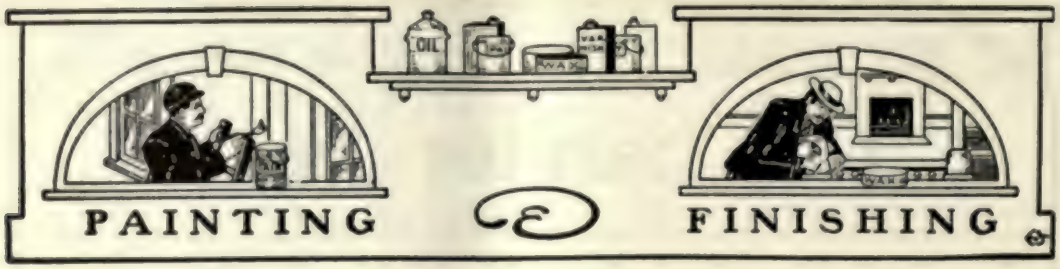


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The Trouble of Cracks in Ceilings.

(From Experiences of a Builder in Amer. Cor. and Builder.)

EXTENDING over a period of sixteen years, I have been associated with many interesting experiments to find the cause and, perhaps, the remedy for cracked ceilings. In many cases considerable expense has been incurred by the contractors in order to assist the architect to solve the problem. The result of the most elaborate experiments impressed me as only deepening the mystery, for some of the ceilings on which most money was spent turned out the worst of all.

No Trouble With Gypsum Plaster.

I had better here explain that I am not now considering the patent plasters on the market, which have been designed to supercede the old-fashioned lime and hair mortar. I readily admit that the use of these reduces the above defects to a minimum.

Therefore confine my remarks to the ordinary lime and hair mortar, still in general use.

A few years ago I settled in a district where sand is not available. All building and plastering mortar consists of ashes and lime ground in a mortar mill. The ceiling mortar is in the proportion of about three of ashes to one of lime, that for walls about four or five to one. Plasterers in many districts would be surprised to learn that hair is practically an unknown quantity in these places. Experience has proved to me that it is not absolutely necessary, though I still believe it is somewhat desirable.

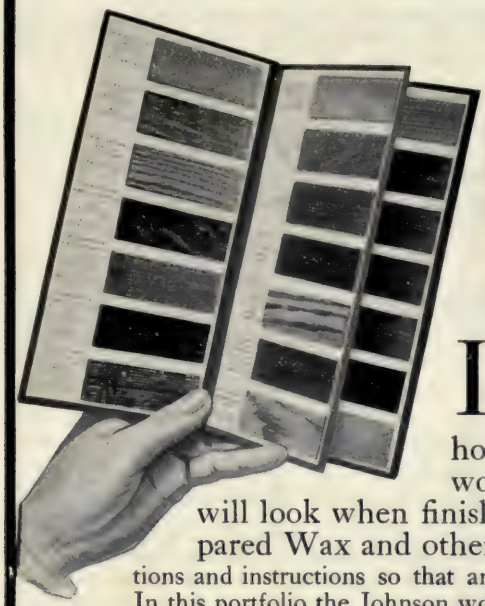
Without attempting the details of my experiments I arrive at the conclusion that cracked ceilings are chiefly due to the free use of loaming sand. Only in rare and isolated cases is it perfectly clean and all grit. I know the plasterers' intense dislike of sharp sand, and their passion for the kind as much like soil as possible, for in their own expressive phraseology, it "spreads like butter." Work can be carired out with greater ease and rapidity when the inferior kind is used. Not to seem unfair to them, I allow that unless plenty of lime is used plastering with sharp grit sand is most laborious, and a man must work very hard indeed to show good results. It must also be remembered that where clean grit sand is not easily procurable, the same can only be obtained at considerable cost; it must either be imported or local sand must be washed. This can only be done where a good price is paid for the work.

To obtain the best results at the cheapest price in districts where sand is costly, I would advocate the use of good, clean ashes in the proportion of two or three to one of lime, with clean, long hair added, after removing mortar from mill, and worked in with a rake. I have know cases where the hair has been thrown into the mill a few minutes before the grinding is completed, but it is obvious that it must be considerably broken by the grinding process, and this being so, the object for which it is used is thereby to some extent defeated. It is, however, a simple matter to learn the best way of mixing it; a few handfuls thrown into a pan will be a sufficient test.

Domestic ashes and flue dust are more objectionable than cheap sand, and should, therefore, never be used. Those supplied by railway companies, colliery companies, or other large works give excellent results.

With this material, as with all lime and hair mortar, it is essential that a good key should be allowed in all lath-

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ing. A case is mentioned above where the laths were lapped at joints, and though this is very common on cottages, it is not good work.

About Linseed Oil.

Linseed oil is best in its raw state for exterior painting and, in fact, many painters use it for interior work. When raw, the oil is extremely elastic and will expand and contract with any kind of surface on which it is used; wood, brick, metal or stone. Raw oil is also very penetrating, save when the weather is very cold, when it will become viscid. The penetrating properties of raw oil enable it to reach down into the pores of all porous materials used in building, forming little root-like connections with the materials on which it is applied.

Boiled linseed oil is the name usually given to oil which has been heated to a temperature of at least 250 degrees Fahrenheit, with or without the addition of dryer. Boiled oil is not as elastic as raw oil and is little used for exterior work. For interior work, however, much is used as conditions are less severe. Then, too, the boiling causes the oil to dry much quicker, which is particularly desirable for interior work.

The possibilities of obtaining pure boiled linseed oil are very slight and much of it sold under this name is really raw oil, to which a cheap benzine dryer is added. This gives the oil the proper color and drying qualities of boiled oil. The adulteration, however, is detrimental to the durability of the oil.—Pratt & Lambert's Varnish Talk.

Origin of the Name Jap-a-lac.

The name of Jap-a-lac is inseparable with that of the Glidden Varnish Co. While riding in a sleeper from St. Louis to Cleveland about twelve years ago F. A. Glidden thought of the word Jap-a-lac as a synonym of Japanese lacquer, and that then the possibilities of developing an immense field for colored varnishes came to him. Up to that time colored varnishes had been made in only a small way, but as a result of the thought, the new child named Jap-a-lac, and deriving its name from Japanese Lacquer, was born at the Glidden plant a short time later, and from the first it was found to fill a large and ever-growing field of usefulness.

Additions have been made to Jap-a-lac from time to time so that today it comes in twenty-one colors.

Covering Capacity of Calcimine.

One pound of dry calcimine will cover, when mixed, approximately as follows: Smooth painted boards, 60 to 80 sq. ft.; smooth unpainted boards, 50 to 75 sq. ft.; rough unpainted boards, 25 to 40 sq. ft.; soft unpainted bricks, 25 to 40 sq. ft.; hard unfinished bricks, 40 to 65 sq. ft.; stone, 25 to 40 sq. ft. Some shop records, carefully kept, show that one gallon of calcimine will cover 270 sq. ft. on average hard plaster walls, 180 sq. ft. on bricks, and 225 sq. ft. on wood. It was also shown that an average workman, using a 5-inch calcimine brush, coated in one hour 22 sq. yds. of rough wall; 38 sq. yds. smooth wall; 20 sq. yds. of brick wall; flat surface, 40 sq. yds.; ceiling, from step ladder, 25 sq. yds.

To Prevent Water Color from Drying Too Quickly.

Add a little flour paste to the kalsomine, beating it well into the mass, or mix the paste with the coloring that is to go into the kalsomine, if any is to be used. The paste will retard the water color a reasonable time and allow of more deliberate application when the air is too warm.—Paint and Oil Dealer.

Finish for Black Walnut.

The easiest and most satisfactory finish for black walnut is obtained by applying a coat of boiled linseed oil to the prepared wood—best when hot. Allow this to stand for some ten minutes then wipe the surface clean with a flannel cloth and allow it to stand over night. Upon the oil, place a coat of thin shellac, and then, when this has hardened over night, sand lightly with fine sandpaper and apply several coats of a good floor wax. Floor wax is in paste form similar to shoe polish and its manner of application is similar to that used in applying shoe polish, unless, perhaps, less of the wax is used. Too much wax will leave ugly chalk-like spottings. A very thin application is sufficient.

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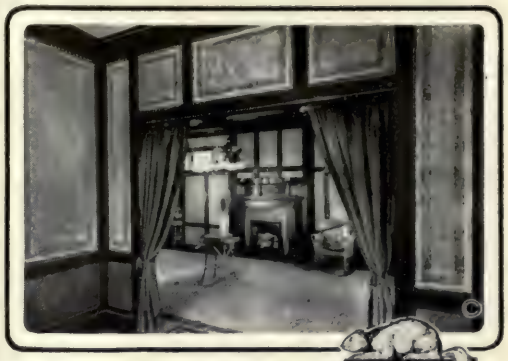
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Wall Stains, Cause and Cure.

If a stain shows through the calcimine when dry, coat the stain with a size made from one ounce of sugar of lead and one quart of soft water.

The walls and ceilings of many public buildings, churches, etc., are often seen stained, and if you have a contract for recalcimining such places, it would be well to look up the roof and have it repaired first of all.

On cheap work stains may easily be covered with paper.

Small creosote stains in plaster may be covered with some leaf metal.

Usually a coat of oil paint, flatted, will stop a water stain, but a heavy coat of varnish is better.

There are many remedies, some of them cures, for water stains. Two coats of flat paint is usually recommended, while some advise zinc white mixed with varnish. Shellac does not appear to do. Some say that a coat of hot lime wash, followed by a coat of varnish, is effective.

Small water stains on a ceiling may be treated with powdered lime mixed with alcohol. Coat the spots with this, and when the size is dry go ahead with the calcimining.

Water stains on a sand finished wall may be coated with oil paint thinned with benzine. Turpentine is better than benzine for the purpose, but is costlier. Shellac also might answer, but its cost is in the way.

A water stained ceiling may be treated thus: If the ceiling has old stuff on it, remove same and make clean. Shellac the stains with white shellac, made thin with grain or denatured alcohol. If no varnish has been used on the ceiling before then varnish it all over, using ceiling varnish thinned with benzine, though turpentine is preferred. Stir in about a pound of pulverized pumice stone or plaster to the gallon of varnish. Or take powdered fresh lime and mix up with alcohol; paint the spots with this. When the spots are dry, go ahead with the calcimining.

If there are some stains darker than the rest, thin up some of the varnish and add a little dry zinc white. But this will be unnecessary unless the stains are very dark, and the ceiling is to be white. If the calcimine is properly made and applied it will cover a quite dark surface.

If shellac is applied over a stain it ought to have at least 24 hours to dry in. This in order to allow the alcohol to escape, otherwise it would come through the calcimine and stain it.

One of the best stain killers is zinc sulphate. It is to be mixed with water, making a saturated solution, and apply two coats of it, allowing the first coat time to dry. After the second coat has dried apply a coat of shellac.

Aniline stains should be treated with an alkali. A coat or two of fresh lime wash is good. Make the lime wash heavier than ordinary whitewash, and when it has dried remove it by scraping, then wash off with sponge and water, and finally size with vinegar, to neutralize the alkali. Treat weak aniline stain with clear lime water, which is the water on fresh slaked lime after standing until settled. Weak sal soda or ammonia water also does.—Ashman Kelley, in Paint and Oil Dealer.

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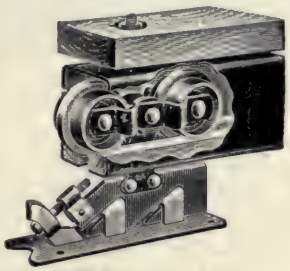
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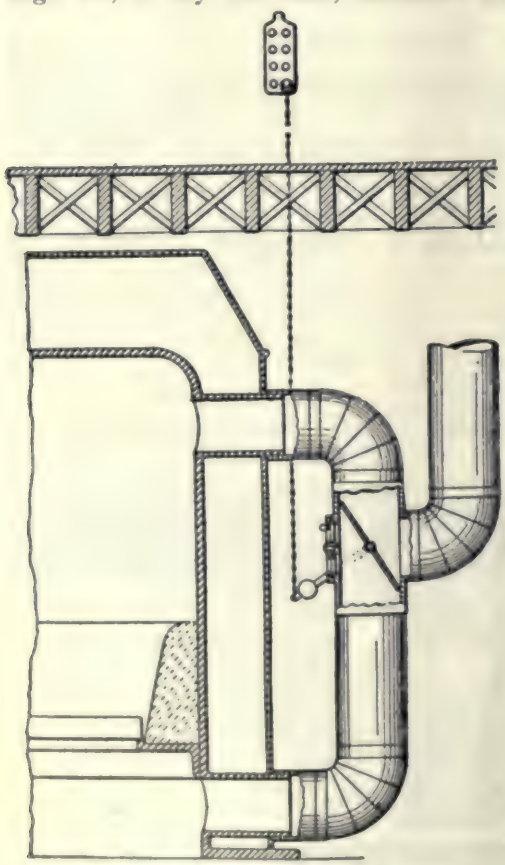
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House Heating Boiler Rating.

A Committee Report.

THE individual members of this committee have been working systematically on the question of rating house heating boilers, and though we are now only reporting progress we are not giving up this important matter. While we have not been able to get the boiler manufacturers as a whole to agree on a standard for testing and rating house heating boilers, we believe in some cases they have come to the conclusion that their catalogue ratings are, to say the least, excessive for house heating conditions. If members want to satisfy themselves on this point, all that is necessary is to ask a boiler manufacturer if he will guarantee the ratings shown in his catalogue, provided the boiler is operated under house heating conditions as now generally accepted, and you will probably find that he will advise you not to expect the boiler to carry the catalogue's rating unless you fire oftener than once in eight hours in severe weather. The committee believes that while house heating conditions vary some, they are fairly accurately defined, and we have offered the following as conditions under which house heating boilers should be operated, and the boiler under these conditions should be executed to carry the ratings which the boiler manufacturers claim for them:



New Type of Damper for Heating Apparatus.

First. That the boiler should be fired only once in eight hours.

Second. That it should not be necessary to burn more than four pounds of anthracite coal per hour per square foot of grate (coal containing at least 12,000 B. T. U. per pound).

Third. That in figuring the amount of direct radiating surface which a boiler should take care of, each square foot of direct steam radiating surface will emit 250 B. T. U. per hour, and each square foot of direct hot water radiating surface will emit 190 B. T. U. per hour.

The committee believes that if this standard was universally adopted it would be equally fair to all manufacturers. What we ask of a manufacturer is that his boiler will, under house heating conditions as definitely defined, take care of the amount of surface which his catalogue claims.—Heating and Ventilating Magazine.

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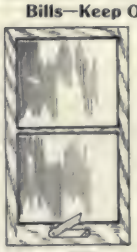
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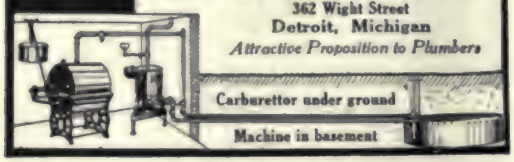
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tanks is done during the spring and summer months, when the space under the roof is suffocatingly hot, it seems to be the most anti-freeze spot imaginable, despite the warning that patches of daylight are noticeable in several places under the eaves, for Jack Frost to approach as easily as did Old Sol. During a winter like that of 1912, when the thermometer was making one low record after another, a few house owners here and there let the fire go out for a number of hours, and the expansion tank connection was frozen. The percentage of such cases, compared with the total installations of hot water heating outfits, is, of course, trifling, and far more annoying than damaging. To do our share, however, in preventing, if possible, the occurrence in even a single building, we are temporarily putting out a tag on each hot water boiler, which reads:

Caution.

Expansion tank should not be set in a cold or exposed place. If the pipe leading to the tank freezes the system will be sealed and this will likely cause breakage of boiler or radiators, because of pressure created by expanding water.—Ideal Heating Journal.

New Type of Damper.

A new type of damper for use in connection with warm air furnaces or other heating apparatus has been designed by W. J. Moreland, of Mottville, N. Y., and is shown in the accompanying illustration. The aim of the inventor is to provide a form of damper by means of which the furnace draft may be carefully governed, the damper being especially adapted for operation in parts of the house remote therefrom. The invention provides complete control of the fire from direct to reversed draft, with one chain running to rooms above; and provides relief from dust and gas when joints in a stove or furnace become imperfect from long use or any other cause. The construction is simple and does away with the ordinary check and other dampers. Heating appliances can be manufactured as cheaply with this improvement as without. The engraving shows a side view, partly in section, representing a furnace flue equipped with the invention.—Heating and Ventilating Magazine.



The Jackson Ventilating Grate

will make your fireplace a perpetual pleasure. Burns wood, coal or gas. Unlike the ordinary grate it produces an even temperature thruout one or several rooms, and gives four times the heat of the ordinary grate. Its special feature is a fresh air pipe which draws pure air from outdoors and sends it heated into the room, while the impure air passes up the chimney. Perfect ventilation is thus assured.

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Let him get the owner to let you put in the vacuum riser pipe—after you have the contract signed for the heating job, and are ready to begin the work.

There isn't a woman in the United States who, once having heard of vacuum cleaning, does not at once make up her mind to have a cleaner in her home at first opportunity. Every man knows it is a convenience his wife should have, and if he had to do the daily drudgery of sweeping, lifting and dusting, he'd have one tomorrow.

Every architect will be glad to join you in recommending to his clients the advantages and the saving which result from at once installing the vacuum riser while you are putting in the heating outfit, or while the building is in process of erection or being remodeled. It's such a sensible thing to do. It's like a friendly tip to the house owner, and will be so regarded.—Ideal Heating Journal.

A New Use for Mineral Wool.

In every well-built house provision should be made against rodents. Tin has proven cheap and effective for this purpose, if placed so that they cannot work their way between studding and floor joists. The first step in this process is to extend the floor boards against the outside sheathing, or if it be a brick house against the bricks, carefully cutting the boards around all studding. Those floor boards where they project should be covered from stud to stud with tin turned up one inch and thoroughly tacked to sheathing and studding. But where salmon brick or any other light, porous brick may be bought for $4.00 or $5.00 a thousand it would be about as cheap to fill in between the studs with a half dozen courses of brick laid in mortar. This has the advantage over tin of forming a very efficient fire stop.

Better than either of these mouse stops, if the owner will stand the expense, is to fill all spaces in outer walls or partitions with mineral wool. This offers considerable sound and heat insulation as well and burns slow enough to discourage an ordinary fire.

Where partitions are set on the flooring or on a sole piece, a continuous strip of tin two inches wider than the studs should be set under them and tacked down.

These precautionary measures make no showing for the money spent on them, and require close inspection while in progress, but they do much to increase the comfort of the inhabitants.—Home Beautiful.

Hand Power Elevators.

The installation of hand power elevators in many different classes of buildings and for many different purposes is becoming more and more common. In the larger private residences hand power elevators are installed as trunk lifts and for carrying baggage, furniture, and other bulky or heavy articles up and down stairs, not only in order to save time and strength, but to save walls, floors, ceilings, stairs, etc. In many homes the installation of a hand power elevator to be used as an invalid lift is necessary because some member of the family is unable comfortably to walk up and down stairs. For use as an invalid lift, the builder must be very careful not to make a mistake in the selection of the outfit which he will install, because an inferior outfit is not only dangerous and unreliable, but it is a perfect nuisance in every way in which it ought to be a convenience.

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A manufacturer with whom we are acquainted has installed four of these outfits in the homes of four brothers, one of whom is a well known banker of New York City. The elevator installed in the banker's residence in New York was the last of the four installed and in placing the order for this invalid lift the banker stated that as a result of his experience with these elevators which had been installed in his brothers' homes, he would rather have one of these improved automatic brake invalid lifts than any electric or hydraulic elevator ever built, even if the hand power elevator cost as much as the electric or hydraulic elevators, because not only is the hand power elevator referred to safe, but it is perfectly dependable because of its extreme simplicity; there is no fear in the mind of the passenger that something may go wrong and the elevator go out of business while he is suspended between floors.

Hand power elevators to be used in cellars, garages, etc., frequently meets all requirements at a materially less cost than would the installation of power elevators, and the maintenance cost of the hand power elevator, if of good design, material and construction, is practically nothing at all.

A good dumb waiter or hand power elevator, properly installed, is a great convenience; a poor one is a nuisance.—National Builder.

A porous glass for ventilation is being made in France, the holes being small enough to exclude dust and drafts.

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or locker finished in snow-white, baked everlasting enamel, inside and out. Beautiful beveled mirror door. Nickel plate brass trimmings. Steel or glass shelves.

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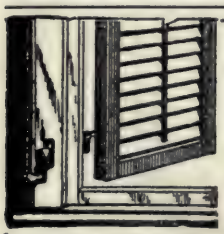
It is a simple, economical device, easily attached to any furnace or boiler. *More than human* in sensitive feeling—and exact automatic action. It will automatically open or close the drafts on the variation of one degree.

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Don't *wish* your house warm in the morning—buy a Jewell and *have* it warm.

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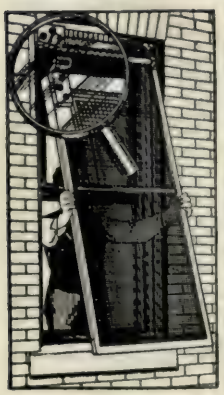
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New Booklets and Trade Notes

WE HAVE received from Sampson & Allen, Lynn, Mass., an unusually helpful catalog called **Home Lighting**, illustrating the newest and best ideas in lighting fixtures. The attractive cover page shows a house ablaze with yellow lights set amid the dusky blue shadows of trees and an evening sky. Both gas and electric fixtures are shown, as well as combination and the styles are of a high order of chaste and refined design. The firm will furnish plans and specifications for lighting the house.

* * *

The **Chamberlain Metal Weather Strip** is an equipment that few up-to-date houses are without. It is an investment that pays in lessened fuel bills and general comfort. Their catalog shows the fixture and method of operation, with many illustrations of its use. Detroit, Mich.

* * *

Modern Methods of Heating Water is the new catalog of the J. Le Mott Iron Works Co., New York, illustrating and describing the Tobey, Efficient, Security and Economic Steam Water Heaters, also the Sunray Tank and Iron Heaters manufactured by this firm. As nothing in house building is more essential than the hot water supply, builders will be particularly interested in the contents of this catalog.

* * *

The Drake Marble and Tile Co., Minneapolis, Minn., send us a handsome catalog showing many interesting designs in **Architectural Wood Mantels**. Details of size and finish accompany each illustration together with a price list, to assist the purchaser.

* * *

The booklet sent out by the **Clay Products Exposition Co.**, Chicago, Ill., will attract attention, showing a handsome red brick dwelling on a grey ground. The object of the booklet is to interest the public in the second Annual Exposition of Clay Products, to be held in Chicago in February and March of 1913. The new architectural contest is expected to be even more interesting and helpful than that of last year and will be a feature of importance.

* * *

Built-in-Baths is a small bu dainty catalog sent out by the J. Le Mott Iron Works, New York, illustrating their Solid Porcelain Baths. Their beauty and completeness make these baths ideal fixtures.

* * *

The Spectrum for September, Sherwin-Williams Co., has the usual charm of this little publication, which we have come to expect as a matter of course. We look with pleasure to the receipt of this dainty brochure, so artistic in its infinite variety.

* * *

The Latch String is the attractive little booklet sent out monthly by The W. S. Tyler Co., Cleveland, O., manufacturers of ornamental bronze and iron. The booklet gives the range and variety of their work.

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ON HOME BUILDING

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IDEAL HOMES MAGAZINE

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A GLORIOUS FIREPLACE FOR A CRAFTSMAN HALL. (See page 398).

KEITH'S MAGAZINE

VOL. XXVIII DECEMBER, 1912 No. 6



TO BE ESPECIALLY COZY THE FLOOR OF THE INGLENOOK SHOULD BE AT LEAST A FOOT BELOW THAT OF THE MAIN ROOM.

The Fire on the Hearth

By Helen Lukens Gaut

A FIREPLACE not only creates an atmosphere of cheer, but of art. Studio, music-room, den, mountain cabin, family livingroom, all seem incomplete without a fireplace. When the world is cold and dark, and dripping and miserable, nothing reaches so deep into the heart as the hour when the flames on the home hearth sing and laugh and frolic, like happy thoughts liberating joy and tipping shadows with splendor. Almost as eloquent of good are the warm, silent, glowing coals, wrapped in phantom breath of gold and grey. The man who is tired, and the man who is tired or worried, invariably



THE BRICK DEEPLY REVEALED BY THE POINTING.

feels contentment when he sinks into an easy chair and stretches his limbs toward the gladsome hearth. With a pipe, a newspaper, a confiding wife's hand, and perhaps a baby's laughter near by, what more of rest and comfort can a man desire. A crackling fire on the hearth is a good entertainer when one has guests. It inspires best stories and anecdotes, and the silences that would otherwise be awkward, are made golden by the witty sparkle of the fire.

A fireplace has always been more or less attractive as an architectural feature of a room, but in recent years more thought has been devoted to its design, and the chief aim of the home-builders of today, is to have a mantel that will harmonize with the finish and furnishing of the room in which it is built. In the East, wood mantels are extensively used, but one rarely sees them in the West. There, houses are of widely varying types and of widely differing material and construction, and almost invariably the mantels, in design and material, are made a definite part of the theme.

In bungalows, and in houses that tend toward rusticity and Orientalism, one finds splendid conceptions in fireplaces. Here, free rein is given ideas. Timberwork, in heavy shelves from four to ten inches in depth, and huge bracketing and block effects that meet the ceiling beams, is combined with great water-polished cobblestones, field stones, klinker and other kinds of brick, and if the size of the room will permit, these mantels are from ten to twelve feet in width, and extend from floor to ceiling. (See frontispiece.) To support a mantel of this size however, the dimensions of a room should be at least sixteen by thirty. If made of brick, good effect may be obtained by building niches or recesses in the masonry, one on either side of the grate, and large enough for a bronze vase or statue. Bricks are made in many sizes, shapes, colors and finish, including both rough and smooth, and the best plan

for the house-builder who is designing his own mantel, is to visit the display rooms and make selection. In the brick mantel there is chance for every cleverness of combination and arrangement, for the methods of putting brick together are unnumbered. White pointing and black, rough and smooth are popular. Sometimes rocks and brick extend far forward from the pointing. Sometimes the pointing is made a prominent feature of the masonry, and again it is so carefully executed and colored it is not noticeable. A hand-made tile with rounded edges has recently been put on the market. This tile is especially designed to use with brick, the edges holding those of the brick in such a way that no mortar is necessary. The effect is clean and rich. Four or five kinds of brick can be used in a mantel with excellent results if the design is good; rough klinker for the body, smooth cream for fire-box and hearth, smooth red pressed brick for the rollock, and black burned brick for a panel above the shelf, the whole topped near the ceiling by timberwork, stained black, or dark brown in imitation of oak.

Cobblestone mantels usually show an irregular face, owing to the natural variation in size and shape of the stones. If white water-polished stones are used, the larger the stones the better, especially if placed at the base. Such a mantel has great charm, particularly if the face is broken by black iron trim, as, for instance, a quaint iron door opening into a small rock cupboard suitable for wines or jewels or the family bible, or by massive wood mantel shelves stained black. When built of stones of uniform size, the stone mantel sinks to the commonplace, and is entirely without individuality. Big stones and little, weathered and worn and staunch, set one to speculation of their past, the big past before they were caught and caged in mortar by man. There is considerable variation in the color of cobblestones, ranging from white to dark grey that is almost black, and



ELEGANTLY EQUIPPED INGLENOOK CASED IN OAK.—MANTEL OF ART TILE.

sometimes one finds them shedding a glittering of mica that is most attractive. For a huge mantel extending from floor to ceiling, excellent results are obtained by combining rough red klinker with the white stones, putting a few in groups, and exposing the end, rather than side or face of the brick. Good features for such a mantel are six by twelve cement shelves, one extending from one side to the other, with two shorter ones placed at odd intervals and positions. The rollock should be of brick, also the fire-box and hearth. Sometimes cobblestones weighing several tons, and requiring conciderable engineering to get into position, are used in the best mantels of this type.

In rooms where there is no intimation of rusticity or Orientalism, but daintiness and art and richness of finish, such as ivory, mahogany, oak, etc., one finds splendid mantels of pressed brick with hammered copper trim, or mantels combining wood and tile. The latter are to be found in the shops in wondrous variety of color and material, finish and workmanship, and they can be made to meet any scheme of decoration harmoniously. In the best up-to-date shops mantels of tiles are usually set up for exhibition and suggestion, while clever designs in the form of photographs or drawings, showing combination and arrangement, will be shown, so that one may more easily decide on the appropriateness of a certain one.



WHERE THE SPACE UNDER THE STAIRWAY IS UTILIZED FOR THE INGLENOOK.

The ingle-nook fireplace is always attractive, suggesting comfort and Bohemianism, and sometimes the space under a stairway is economized for this purpose with artistic results. A frame for an ingle-nook, usually some timberwork or lattice, or carved wood scheme, calls for originality, as do the built-in seats, boxes, cupboards and furnishings. If large enough for two or three easy chairs, an ingle-nook is far more satisfactory than

one with only a built-in seat and a book-case. To be especially cozy, the floor should be at least a foot below that of the main floor.

A western woman who has several fireplaces in her house, has the outer edge of every hearth raised three inches, or, in other words, there is a tiny wall of masonry, on which at regular intervals are iron posts four inches in height with rings at the top, through which are stretched black iron chains. This 'fence' performs three pleasing charities—it is good to see, is a comfortable foot-rest, and it prevents ashes, coals, etc., from straying into mid-room. A convenient feature that should never be left out is the built-in wood-box. A box seat adjoining the fireplace, and containing three apartments, one for paper, one for kindling, and one for log wood, is an untold comfort. If built against the outside wall, this box seat should be fitted with a door through which wood can be shoved from without, thus eliminating the muss usually made by carrying it through the house. Another good scheme is to have a trap-door cleverly fitted into the oak floor in front of the hearth, under which, within easy reach is a roomy wood box. A first class carpenter can make a trap door so perfectly it will be almost invisible, and even if it does show, a small Turkish or Indian rug will hide the secret.

Probably one of the most unique fireplaces ever built is to be found in a stone cabin at Pine Crest, in the San Bernardino mountains in California. Founded on a five by five block of masonry, it stands in the center of the room, and has four openings, so that the glow and cheer of the fire radiates in every direction.

A Home-Like House

By A. E. Marr

IF THE homebuilder is fortunate enough to secure the services of the architect who combines with practical durability the rarer quality of getting the absolute most out of the sum invested, some truly astonishing effects can be produced, and really at comparatively small cost.

It is with such a type of house I am now dealing, and the following details and illustrations are intended to, perhaps, smooth the way for some intending home builder, in order that he may more readily attain results that were only achieved after many houses had been built with pencil and paper, and many questions asked and answered.

It was the determination of the owner that the interior should receive the utmost consideration, second only to the soundness of the structure. The result is indeed most satisfying. The house is two and one-half stories and shingled. The second story has a slight overhang and is topped with a half story, which is a rather more pronounced overhang, these features giving both floors good room space. The roof line on the front is carried down and forms with the aid of three massive concrete pillars the piazza or porch. The chimney, composed of cut stone, with its attractive plainness, adds character to an already pleasing design. The house frame is of best quality spruce timber, of thorough construction and boarded in with matched spruce boards.

On entering the house, after passing

through the vestibule flanked on either side by coat closets, one passes into the reception hall, which is about 14 by 20 feet. This room serves as the music room, has quartered oak floors, carefully selected and matched grain, and finished in oil and rubbed to a dull gloss with wax. The standing finish, including the four foot wainscoting, is of white wood, covered with a delicate gray enamel. Four windows occupying the entire end of the room give a volume of sunlight and air. These windows are made more attractive by means of leaded glass, and the two center ones are full length and serve as doors.



THE RECEPTION ROOM IS ALSO USED AS A MUSIC ROOM.

The ceiling has been treated in an ingenious manner. Rather, I should say, there is no ceiling, since it is finished as an open well, permitting of a balcony on the second floor, extending entirely around it, and whereas this treatment has sacrificed some room space, yet the open well effect is really most attractive. The walls are papered with a two-toned gray covering, and the hangings are velour of a raspberry shade, and the wood finish, windows and hangings are similar to the hall below. The opportunity to utilize this high ceiling effect has been further taken advantage of by suspending a massive chandelier in mid-center.

On the right of the hall is the living room, which is about 16 feet square. This room has a quartered oak floor, standing finish of black cypress, stained mahogany. One entire end of the room is devoted to a bay, which contains three large windows. The walls are covered with green cartridge paper, and the ceiling is finished in a soft gray color. The



THE ROOF LINE ON THE FRONT IS CARRIED DOWN AND FORMS, WITH THE AID OF THREE CONCRETE PILLARS, THE PIAZZA OR PORCH.

window hangings are of Java cloth, green ground with orange figures. A good generous fireplace, which occupies the greater portion of one side of the room, completes a very homelike and attractive effect.

The study leads from the livingroom and is about 11 by 14 feet, and owing to the very wide entrance is really a part of the livingroom. The floor, standing finish, paper and hangings are identical with the livingroom. The windows occupy one entire end.

The diningroom, which leads from the left of the hall, is about 15 by 20 feet and has a quartered oak floor, and is finished in black cypress with a 7 foot 6 inch wainscoting, stained mahogany. Five windows afford ample light and ventilation. The ceiling is finished with beams and the exposed wall and ceiling space is covered with gold leaf. The hangings in this room are of a coarse texture blue cloth, and a built-in china closet and gas log fireplace complete this room.

The kitchen is about 11 by 15 feet, and



FIRST FLOOR PLAN



SECOND FLOOR PLAN

has a floor of rift Georgia hard pine, and has standing finish, including paneled dado, of hard pine.

The second floor contains three chambers and boudoir, as well as very generous closet and dressing room space. The principal chamber, with its annexes, occupies one entire end of the house. The bedroom itself is about 16 by 18 feet, has hard pine floor, with standing finish of whitewood painted white. The paper is a delicate blue and white, and the hangings are of white cretonne with blue figures. The boudoir, which leads from this room, is about 8 by 12 feet, and is finished the same as the chamber, except that it contains two windows and is enriched with a cheerful, comfortable fireplace. The balance of space at this end of the house is devoted to a large closet.

The two remaining chambers are practically 14 feet square. They both have hard pine floors and closet space. One contains a fireplace, has whitewood finish stained mahogany, and is papered with a delicate yellow covering. The other chamber is finished in whitewood painted white, and the walls are covered with rose paper, and the hangings are of rose color.



THE LIVING ROOM SHOWING BAY WITH ITS COMFORTABLE WINDOW SEAT.

The half story above is divided into three rooms, two chambers and a den; the floors and finish being hard pine.

The cellar has a cement floor, is eight feet in the clear and contains a finely equipped laundry, some 12 by 18 feet in size. The balance of the space is devoted to a preserve closet, toilet, and two coal bins, holding respectively fifteen and twenty tons, and the furnace room.

A convenient feature in this house is the clothes chute, which drops from the hallway near the linen closet on the



THE FINISH OF THIS CHAMBER IS WHITE ENAMEL WITH PAPER IN BLUE AND WHITE.

second floor down to the laundry. Two excellent features are that all the closets contain windows, and the chimney bases have iron doors, permitting the removal of the ashes from the fireplaces above as well as of the accumulation of soot from the chimneys.

The Cost.

Excavation and foundation	$1,000
Carpentering	3,572
Painting and glazing	518
Inside plastering	580
Plumbing	520
Electric wiring	128
Gas piping	50
Screens, Higgins'	204
Stairs	475
Hardware finish	78
Furnace, hot air and hot water	475
Total	$7,600
Architect's commission, 10%	760
	$8,360



TAPESTRY PAPER IS USED ABOVE THE WAINSCOT OF OPEN PANELS.

For the Girl Who Wishes to Make Her Bedroom Attractive

By Una Nixon Hopkins



GRAY WALLS AND GRAY FURNITURE; DECORATIONS OF PINK POND LILLIES AND GRAY-GREEN LEAVES.

NOTHING delights a girl quite so much as an attractive bedroom. It is her sanctum sanctorum. Here she dreams dreams and sees visions. Certainly it should be as beautiful as possible.

Though beauty is of great importance, the bedroom first of all must be well lighted and carefully ventilated. And a good deal of restraint in furnishing is necessary to make it altogether sanitary. room in which one sleeps must be simple in order to be hygienic. Very few pieces of furniture are necessary for such a room, to make it pretty and comfortable, but these articles must be carefully chosen.

The most vital things from the beauty view-point are the color scheme and the decoration, together with the general arrangement of the room.

The girl who can draw and paint has the distinct advantage of the one who does not in "fixing up" her room. On the other hand there is a good deal in the way of decoration that one may ac-



PINK WALLS AND CREAM ENAMELED FURNITURE, OLIVE GREEN RUG.

complish without any technical knowledge of art. Stenciling, for instance, is comparatively easy and very effective.

The rooms pictured are an illustration of what may be done with stenciling. Designs for this work may be purchased at low cost, and only care and neatness are necessary to manipulate them.

The first sketch shows a room which to begin with had no features. As the girl who was to occupy it wanted places for putting things, a cupboard was built on either side of two windows with a seat between them. The corners of these cupboards extend upward and terminate in standards for electric candle sticks.

The wall of the room is tinted a very light gray, with a still lighter tone above the picture mould where it is almost white.

The woodwork, also gray, is a shade darker than the wall, and the furniture, including bed, dresser, chairs, etc., very nearly match the woodwork.

A conventional design—pale pink pond lilies with broad gray-green leaves—is stenciled above the picture mould, and the same motif is used on the bed valance, of white scrim. The valance at the window is buttonholed across the bottom with pink silk floss, a long and short stitch alternating. This gives just a suggestion of pink, for to repeat the stenciled frieze on the valance would bring the two decorations too close together.

One sofa pillow on the window is of gray linen stenciled in the lily design; the other two are plain and of rose color.

A dull rose colored rug practically covers the floor. A gray thread in the warp gives a grayish sheen to the rug in certain lights.

This room which seemed a bit plain

and almost old-fashioned to begin with, is now quite up-to-date and charming.

In the second sketch the prevailing color of the room is pink—pink is always a great favorite with girls.

The walls—below the picture mould—are pale pink, while above a tint of cream color has been used which is identical with the ceiling.

A graceful frieze is here stenciled with the flowers in pink and the stems in greens.

The woodwork is cream color as well as the furniture.

Relative to the furniture: A bed of good design was purchased along with some chairs to match and the other pieces were made at home. An ordinary pine table was the beginning of a very pretty dressing table. A mirror was first added to the table, then the detail was made to match the bed as nearly as possible.

Very simple is the stand at the head of the bed, yet besides the shelf for the row of books at the top, there is a large compartment below, large enough, in fact, for my young lady's best hat, however much befeathered and beflowered it may be.

Cream colored curtains daintily stenciled relieve the pink walls; this same curtain material being used for bed-spread and pillow-sham. Both spread and sham are finished with a deep hemstitched border.



ROOM IN BUFF AND BLUE WITH A FIREPLACE.

A few prints showing tones of pink, with white mats and enameled frames, furnish the pictures for the room. A bowl of pink roses, when they are in season, adds very much to the decoration of the room. It is doubtful whether the decorative quality of flowers is entirely appreciated, for many a room, which otherwise would be commonplace is most

charming when flowers of the right color are arranged in an artistic manner in the right place.

The rug here is an olive green, the border being of a deeper tone than the center.

The room with the fireplace has buff walls. Buff is a cheerful color for a bedroom, especially if the room is not on the sunny side of the house.

Woodwork and furniture here are painted a very deep cream color, while the tiles of the fireplace are a variable dull blue.

These tiles supply the keynote for the tones of blue used in the stenciled decoration beneath the picture mould, and on the bed-spread and curtains.

The pictures in the room are blueprints. They were made by the girl herself and touched up with water colors. The picture over the mantel is a portrait of a friend, snapped with an ordinary camera—enlarged and blue-printed.

There are tall brass candlesticks on the mantel, a small bas-relief and a bowl of blue flowers to carry out the color scheme.

No doubt the mantel shelf is the most sinned against place in the average room which contains a fireplace. This is unfortunate, for a cluttered mantel will ruin the effect of a whole room. But it is always such a temptation to put just one more thing on the mantel.

The rugs here are cotton, blue and cream color, hand-woven. In the rugs again the blue of the mantel tiles has been repeated. On the end of each rug is a wide border of solid blue which seems to hold them down and give the room character.

The bed-spread of buff linen is stenciled in blue. And at the windows are white muslin curtains with side curtains of buff linen bearing the blue stencil.

As none of the rooms under consideration were large it seemed wise to keep the wall surfaces plain with the exception of the slight stenciling—for to break up small wall spaces with decorated paper tends to make rooms appear smaller than they are in reality. Besides, figured wall paper to some people becomes very tiresome on a bedroom, however beautiful it may be.

Also, when it is desirable to extend the apparent space of a room, it is well to avoid too strong contrasts of color. Therefore, in these rooms, the walls, woodwork and furnishings were largely kept in the same key.

Treatment of Reception Halls

By Margaret Greenleaf

THE hall is often called the index of the home. There is, however, much of truth in this, as here one may form very definite impressions of what the remainder of the house will have to offer.

In many of the modern houses of moderate cost the entrance hall and reception-room are one, and if the house is planned with a small vestibule, which can be fitted with coat hooks and possibly a narrow table with mirror above, it will be found to fill all the necessary requirements of an entrance hall.

For receiving one's friends the hall when combined with the reception-room and living-room is delightful. The real hospitality of the home is at once extended, and the guest is welcomed in the family circle. For the stranger within



OAK WOODWORK WITH WALLS OF YELLOWISH TAN GRASSCLOTH, AND GOLDEN BROWNS IN THE FURNISHINGS.



RECEPTION HALL WITH COON STONE FIREPLACE AND MAHOGANY WOODWORK.

our gates a less intimate place of waiting is more desirable, but where something must be sacrified—and it is a question of a small hall and a small reception-room—as against the larger single room, experience teaches us the latter is more to be desired, particularly if, as we have stated, the vestibule can be introduced in the plan. The decoration and furnishing of such a room must retain something of the formal dignity which the hall requires.

Dainty or frivolous color schemes are quite unsuited to such rooms as we describe, where the architectural detail is colonial in character, or the standing woodwork is treated with white enamel, the wall coloring, while it may be lighter in tone than that which would be used with such a background.

There are various designs in hall papers that are lovely with white woodwork in a colonial hall, the best and newest being those with pale gray leaves and flowers on a white background. The effect is soft and light, for the design closely covers the background and the delicate tints of the gray are misty and cloudlike.

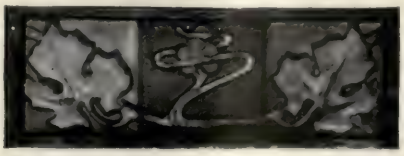
There are few more decorative assets than one of the large Empire sofas, of the sort denominated swan neck. The real antiques are rare, and very expensive, but reproductions are attainable. The best shape has arms which spread out at a wide angle. Set at an angle to a fireplace, or, in a long, wide hall, against the side of the staircase, one of these sofas has a delightful suggestion of old time dignity.

It is found that mahogany, cherry or birch furnishings do not adjust themselves readily in an oak-finished room, although the oak may be treated in a way that makes the tone practically a part of the side wall treatment, that is, by reproducing some color shown in the design of the wall covering in the stain used for the standing woodwork.

The oak woodwork stained green will assist the effect and provide an attractive setting for either mahogany or oak furniture; or the oak may be stained silver grey in tone and given a dull natural finish. This has a weathered effect, and when soft grays, old blue, or green figure in the color scheme the combination is very charming.

The various shades of rick, dull and dark brown show well on oak, and may be with care brought into the wall treatment in the same manner as described for the green and gray stains. With a dark wood finish, the wall must show softer, graver shades of color. For instance, if the exposure of the hall is northern, a shade of yellow tan or deep café-au-lait should be selected in preference to the strong, clear sunlight yellow, or the shade known as colonial; though either of these would be well suited to a reception-room proper. Old rose or pastel pink, turquoise or pale blue, apple or nile green are also colors which must be entirely eliminated from the selection made for the hall and the reception-room combined.

A soft shade of mulberry red, either light or rich and deep in tone, dull old golden brown, or any of the various shades of green from olive to Empire may be used.





Home Grounds and Gardens

"I beseech you, forget not to informe yourselfe as diligently as maybe, in things that belong to gardening."
—John Evelyn, 17th Century.

Hints for the Indoor Window Garden

By Tarkington Baker

IN the selection of plants for the window garden begin with bulbs. These bloom most successfully for the amateur. Narcissi, tulips, hyacinths, crocus, scillas—these and many others may be potted this month. Pot as soon as possible and set the pots in a dark corner of the cellar where the temperature will not rise above forty-five degrees, or bury them out-doors beneath six or ten inches of earth or sawdust. Here let the pots remain until root growth completely covers the ball of earth in the pot. Then bring them gradually to the light.

Narcissi should be allowed ten weeks for rootings, although the tender varieties root very well in six. Among the best hardy narcissi for forcing are Golden Spur, Emperor, Empress, Sir Watkin, Barrii conspicuus, Princeps and Horsefieldi.

Hyacinths may be flowered in water jars or in pots of soil. Use five-inch pots for good-sized bulbs and place one in each pot. In potting, permit at least one-fifth of the bulbs to show above the surface of the soil.

In potting tulips, set from three to six—according to size—in a five-inch pot.

Good soils, for potting purposes, may be secured in most gardens and cultivated fields, but the best is prepared by cutting thick sods, piling them up, and allowing them to rot. A compost heap so formed should be allowed to stand at least six months, so as to have it well rotted. Where this is impossible the sod should be thoroughly broken up and shaken out, so as to secure and retain all the fibrous parts possible. The only part to be discarded is the heart or crown, which is likely to grow again under favorable conditions.

In the culture of ferns indoors, clean foliage is the first essential. Shower the fronds frequently, making sure that the water is of the same temperature as the atmosphere of the room in which the plants are grown—warmer if anything. Fight scale, one of the most common and most troublesome pests in fern culture, by rubbing it off with a brush or rag dipped in whale oil soap suds, or kerosene emulsion. Kill the green aphis with nicotine, either in solution or by fumigating with dust or tobacco paper.

The best ferns for pot culture indoors are the following:

Adiantum cuneatum, maidenhair fern.
Lygodium japonicum, climbing fern.
Nephrolepis exaltata, var. Bostoniensis, Boston fern.
Nephrolepis exaltata, var. Scotti, Scott fern.
Nephrolepis exaltata, var. Whitmanii, Whitman's fern.
Nephrolepis exaltata, var. Piersonii, Pierson fern.
Nephrolepis cordata, var. compacta, kidney or sword fern.

In situations where there is good light but no direct sunshine, abutilons will do well and healthy plants of these are generally in bloom. Other plants suitable are begonias, primulas, fuchsias, swainsonias, ferns, palms, and, in fact, nearly all foliage plants except those with highly colored leaves.



CHINESE PRIMROSES, MARGURITES, BEGONIAS, CYCLAMEN, AND FOLIAGE PLANTS IN A SUNNY WINDOW.

In making out the list of plants for the indoor garden, determine, among other things, what the average temperature of the room is at night during the winter. If the temperature falls to fifty degrees, select the following list:

Senecio or parlor ivy; English ivy;

lygodium, or climbing fern, maurandia; azaleas, chrysanthemums, geraniums, Chinese primroses, Paris daisies or Marguerites, camellias, cinerarias, violets, cyclamen, ardisias, carnations, sweet alyssum, palms, auracarias, euonymus, and pandanus.

Water when the plants require it. And plants require water when the soil is dry enough to be slightly powdery when rubbed between the thumb and fingers.

If through accident or neglect water is withheld too long, set the plant, pot and all, in a vessel of water, and let it remain



STAND OF CHINESE PRIMROSES, A "STAND-BY" FOR THE WINDOW GARDEN.

If the temperature is sixty degrees at night, the following list may be used:

Asparagus in variety, smilax, coboea scandens, madeira vine, senecio mikanioides, Japanese hop, fuchsia, mahernia odorata, lobelia, mesembryanthemum, abutilons, browallias, begonias, petunias, bouvardias, heliotropes, Chinese hibiscus, swainsonia, geraniums, cupheas and richardias.

until bubbles cease to rise. Be sure the water is the same temperature as the room.

Jardinieres should be thoroughly scrubbed and scalded every few weeks, or they become sour and cause the plants kept in them to become full of earthworms. They should be sunned occasionally, in addition to the scrubbing and scalding.



THE SMALL HOUSE SERIES.



EDITOR'S NOTE.—In these days when the cost of building has, after the manner of all the other costs of living—mounted skyward—ideas for small, low cost yet convenient and comfortable homes, are peculiarly acceptable. With this thought in mind, a series of articles under the above caption—"The Small House"—will run through the year in KEITH'S MAGAZINE.

An Artistic Little Home in Minneapolis

THERE are two cities in the United States noted for the unusual merit of their small houses—Pasadena, Cal., and Minneapolis, Minn. Wide apart in situation and climate, they are surprisingly near together in the treatment of their small houses. True, the bungalow type, so perfectly adapted to the needs of the California climate, is more ubiquitous than in Minneapolis, though even in the latter city there has come to be a decided sprinkling of this type of house; but the same artistic application of simple design, the same intelligent use of material, the same careful study of balance and harmony and rhythm, characterizes the more modest homes of either city, and renders them distinctive of their kind.

The example chosen for this last number of our Small House Series is one of these Minneapolis homes, and it illustrates, in a marked degree, that sincerity and lack of affectation before alluded to, while at the same time it is full of interest and charm. It shows, too, a wise choice as to site, and a felicitous adaptation of design to situation. This is a "wooden" house—despite the concrete craze,—but it has none of the "toothpick" style that formerly prevailed in frame houses of low cost. While not a bungalow proper—having a well arranged and commodious second floor—it suggests that style in the wide slope of the roof with its deep eaves, and in its general treatment. The spreading roof shelters the living porch on the south and constitutes one of the economic, as well as artistic, features of the construction. Deep dormers in the roof permit an excellent second floor, well lighted and spacious, while relieving the great expanse of roof line.

The exterior construction is of the simplest, consisting of cement basement walls carried up for the foundation above grade to form a water table.

The chimney is cement with capping of red brick. Rough surfaced siding is carried around the first story to the window sills, where a belt course enlivens the exterior.

Above this shingles are used, and stained a soft, reddish brown, which on

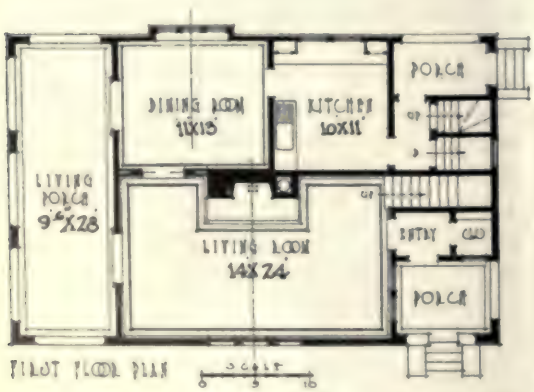


Edwin H. Hewitt, Architect.

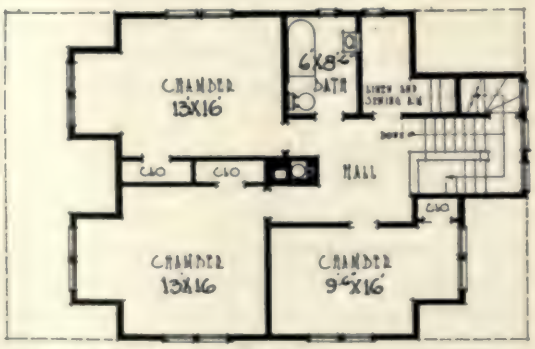
the rough surface has the texture of velvet. Even the trim and the roof boards have the same brown stain, giving a homogeneity most desirable in a small house. Color relief is given by the dark red roof and red brick cap of the chimney, the black window sash and the brilliant bloom of the flower boxes.

As will be seen by the floor plan, the house is of no mean dimensions, being 29x 45 over all. The interior provides every essential of modern comfort, including a great living room with that acme of home life, a famous fireplace, ample porch and chambers, good heating and plumbing.

This has been attained and the cost kept down, by reducing hall and stair space to a minimum, limiting the number of openings—always a source of expense—at the same time providing ample air and light by the judicious placement and by an interior treatment of detail which rigidly excludes all superfluities and frills. The wood work inside is of fir, finished with a



PILOT FLOOR PLAN SCALE



SECOND FLOOR PLAN SCALE

brown stain and finished with a coat of wax.

Great simplicity of detail has been used, and not a molding or member appears throughout. The baseboard and the casings have the edges slightly beveled, and that is all. The mantel shelf is a plain, heavy slab of fir. But the effect is wonderfully pleasing and in harmony with the design.

The example of the small house here given shows what can be done in securing an artistic, complete, satisfying home at a small outlay of money, when both architect and client can free themselves from traditional forms and reduce construction to the essentials of good design.

Cost Items.

Foundation and chimney	$620
Millwork	495
Plastering	282
Hardware	84
Electric wiring	70
Painting and finishing	284
Carpenters' labor	920
	$2,855
Contractor, 10 per cent	285
	$3,140
Heating and plumbing contract	642
	$3,782

The Finishing of Hardwood Floors

IT is seldom, indeed, nowadays that a house of any pretensions to completeness is not furnished with what is termed "hardwood floors," but the great variety of woods now used under this term and the equally varied methods of treatment of these woods furnish material for endless discussion. Shall the floors be of oak or birch, beech or maple, or hard pine?

It is not so very long since oak was the only wood thought of for hardwood floors. People thought it was the only correct thing. But within a few years many new and surprising effects have been developed from other hardwoods or combinations of them, such as maple and the birch and beech woods from Michigan forests.

For dark rich effects oak has no equal. The houses of our English ancestors were of oak and in some cases even their sacred edifices and the test of time shows them after a lapse of several hundred years remaining sound, sometimes outlasting the stone and brick with which these structures have been repaired.

Maple is very dense and hard and takes a beautiful polish. Its light cherry coloring is most effective where light color schemes are used and for bedroom floors is par excellence. With but a protective finish applied some maple is almost ivory in tone and is a perfect background for dainty boudoir rugs in soft colorings. An upstairs maple floor is recalled, which was in such perfect condition as to occasion remark, having been finished with floorstain two years before and not since touched except the ordinary dust. Truth compels the further explanation that the finish had three months in which to harden perfectly before a foot trod upon it.

Beech and birch are used considerably and they not only answer the demand of durability, but are susceptible of a beau-

tiful finish and will receive a variety of color stains. A birch floor really demands a stain, as its natural shading is so varied as to produce an unpleasant striped effect if laid alone, unless more carefully selected and matched up than usually happens. Mahogany stains seem best adopted to it.

Beech takes an excellent walnut stain, and will also receive a green flemish tinge, making it appropriate for use with the almost universal green color schemes now in vogue.

None will deny that the wearing quality is of prime importance, but that need not interfere with bringing out the special beauty possessed by the woods themselves—beauty which lies in the grain, the texture, the surface appearance, the natural shading of the natural woods and the effects produced by color treatment in various ways.

The first thing, of course, is to be sure your flooring is of the best quality of its kind and too much stress cannot be laid on unhurried finishing. With the end almost in sight it is so hard to wait to get into the new house where it looks all right. But to have a permanent finish to our floors we must have time. The wax or varnish should be put on in thin even coats and allowed to thoroughly harden before a second coat is applied. Two weeks is not too long to allow for the finishing of the floors, though it is often allowed but three or four days. The wax finish for floors gives a rich even surface and is not more difficult to maintain than other finishes. Oil is not to be thought of where beauty is a consideration. It darkens the floors, holds the dust to it and has no finished surface.

In varnishing, the foundation is either a "filler" or a "sizing," and the use of one or the other depends on whether the wood is open grain or close grain. Of the more common woods the open grain are hard pine, oak, ash, chestnut, walnut, butternut, mahogany and rosewood. The close grain woods are white pine, maple, cherry, cypress, birch, redwood, whitewood, and satinwood. If the floor is of open grain wood it should first be treated with a paste wood filler, to fill all the pores and thus leave a smooth surface for the varnish. If the varnish were applied without a filler first having been rubbed into the wood the varnish would sink into the pores and present a pitted surface. For close grained woods a sizing should be used instead of a filler, and this sizing is made of two parts of turpentine to one part of hard drying varnish.

To wax a floor that has been cleaned and dried, first give it a coat of any of the good prepared "foundation" mixtures. After the first coat of wax has been rubbed smoothly over the floor and has been allowed to dry the second coat should be applied. The great danger is getting too much wax on the floor, for an excess will result in blackened patches and the accumulation of dust. After the second coat is dry go over it with a weighted brush wrapped in a woolen cloth, and rub always with the grain of the wood. This forces the wax down into a natural position, whence it may be dislodged with the greatest difficulty. A floor so treated ought to last a year with proper care. As for the daily cleaning, remember that the wax should never be touched with water. Grease spots may be removed with a little turpentine. White marks and dullness, caused by accidental spilling of water on wax, may be eradicated by rubbing the places with a warm woolen cloth. For the rest the wax floor should be rubbed with a weighted polisher and always with the grain of the wood.

Designs for the Home-Builder

CONTRIBUTING ARCHITECTS

Design No.
B 385 GUSTAVE W. AEGERTER, St. Louis, Mo.
B 386 ARTHUR C. CLAUSEN, Minneapolis, Minn.
B 387 BUNGALOWCRAFT CO., Los Angeles, Cal.
Design No.
B 388 JOHN HENRY NEWSON, Cleveland, Ohio
B 389 KEITH'S ARCHITECTURAL SERVICE, Minneapolis
B 390 W. E. COOLBAUGH, Los Angeles, Cal.
B 390 CHAS. S. SEDGWICK, Minneapolis, Minn.

Design B-385.

IN ANOTHER column, reference is made to the competition by well known architects and architectural draughtsmen for the prizes offered by the National Fireproofing Co. for the best designs for small houses built of Natco Hollow Tile, the cost not to exceed $6,000. The design here shown, drawn by Architect Gustave W. Aegerter, received honorable mention in this contest, and is one of those showing unusual merit for artistic exterior while meeting every requirement in respect to convenience and excellence of floor plan.

All the walls, including basement and interior partitions, are of hollow tile. While no attempt is made for a strictly fireproof house, this construction insures much greater fire resistance than ordinary frame.

The usual hardwood interior finish and floors is provided for, with hot water heat and open plumbing.

Design B-386.

This design is in marked contrast to the preceding one. It is the regulation square house of frame construction, with exterior of wide and narrow siding. It is the kind of house many people choose on account of its economy of floor space and construction.

It shows a well arranged floor plan, with living room of extra size—15x30—running the entire depth of the house. The front entrance is directly into this living room, and the stairs are placed midway, and are open half way up. This partly open staircase opposite the fireplace gives opportunity for an interesting architectural effect. The dining room is placed in front and the service part of the house is well arranged.

The porch has a cement floor, the interior floors are birch and maple, with oak or birch trimmings.

The basement walls are 7 feet 6 inches. First floor, 9 feet, 5 inches, and second floor, 8 feet, 3 inches. The basement walls are concrete and the house is set close to the ground.

The estimated cost, including hot water heat and plumbing, is $4,000.

Size, exclusive of porches, 31 feet, 6 inches by 31 feet.

Design B-387.

The bungalow illustrated this month is one of the new almost flat roofed cozy looking houses which have become extremely popular on the west coast and in fact are getting more and more popular throughout the country. It would seem at first glance that in a climate where there is heavy rain and snow the roof would be subject to much leakage, but this has not been proved to be the case, as the prepared roofings have been brought to such a standard of perfection that there is no danger whatever from this source and as the rafters are thoroughly braced by pieces of studs from the bearing partitions, no amount of snow will cause the roof to sag in the slightest degree.

The average cost of this house in Southern California is $2,200; back east, with cellar and furnace and with warm construction, the cost will probably run up about $500 higher. As there is a good air space between the ceiling and the roof the house is as cool in the summer as any other construction. This bungalow is 30 feet front by 44 feet deep, exclusive of the front porch which is 8 feet by 24 feet.

The side walls are covered with shakes set 8 inches to the weather; the porch work and chimney are of dark burnt brick pointed with colored mortar and the roof as suggested above is of almost any of the prepared sheet roofings.

The cost given covers electric wiring and fixtures, plumbing, gas fitting, painting, staining, finishing, hardwall plastering, tinted throughout, screens, and in fact completes the house for occupancy. The living room has oak floors, a handsome mantel and commodious fireplace with bookcases built in the buttresses on either side of the opening which leads into the dining room which also has oak floors. a handsome mantel and commodious fireplace with bookcases built in the buttresses on either side of the opening which leads into the dining room which also has oak floors. This room has a beautiful built-in buffet, paneled wainscoting with plate rail, etc. The bedrooms are of good size with large closets and there is a linen closet conveniently located. The kitchen is fitted with every convenience and the screened porch is large. The breakfastroom is small but light and cheerful and has its own china closet. It could be used for a sewing or maid's room if preferred.

Design B-388.

This design is planned with reference to eliminating all but strictly necessary cost. It comprises five rooms of good size with stair, bath and front and back porches. Separate hot water heating plants are provided, and a laundry in each basement.

The construction is frame and the exterior of siding. The basement walls and foundation are concrete. It is intended to use hardwood for the finish of main floors and pine for the balance of house with floors of birch or maple.

The ceiling height in basement is 7 feet, 6 inches; first floor, 9 feet, 5 inches; second floor, 8 feet, 3 inches.

The estimated cost, including heating and plumbing, is $6,000.00.

Design B-389.

This design combines the comfort and spaciousness of a two-story dwelling with the low lines and bungalow form so alluring and popular. This handsome residence was built and the cost of $6,000 is extremely low for such a beautiful home.

The exterior construction is of cement plaster and shingle, with massive porch pillars of concrete. The cement wall extends to the ground level. The long slope of the wide spreading roof is broken by dormers which light the second floor and projecting over the porch give increased space. There is besides, a very good storage attic; yet the low lines are preserved in a most skillful manner.

The admirable floor plan speaks for itself. A second bath could be arranged in place of the small bedroom on the right. The first floor includes a servant's dining room, den, and library or sun parlor opening upon a cement terrace.

The basement is provided with every convenience. The first floor ceilings are 9 feet, 5 inches; second floor, 8 feet, 3 inches. The finish is oak or birch, with white enamel above.

Design B-390.

This is a low cost bungalow design with concrete foundation, chimney, front porch and fireplace inside of cobblestones. The side walls are of shakes, stained. The roof is shingle. The finish is soft wood throughout, stained and



Courtesy of National Fireproofing Co. Gustave W. Aegerter, Architect.

DESIGN B 385

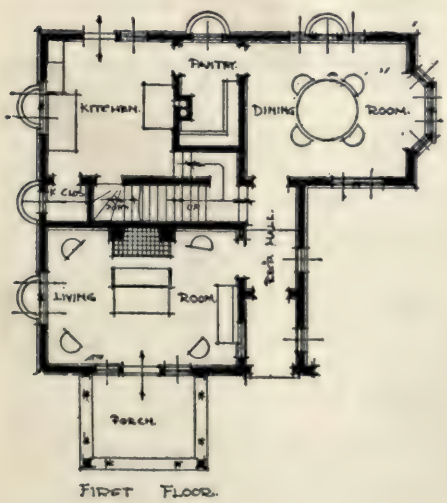
Design for "Natco" Hollow Tile

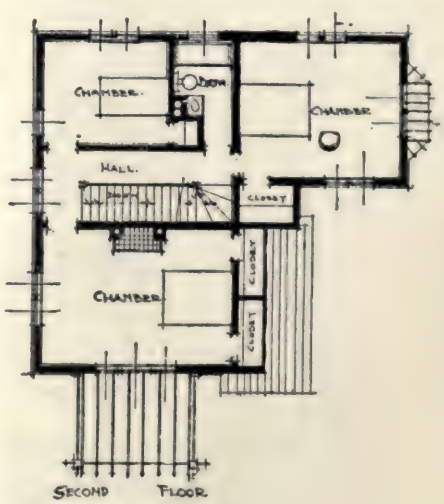
waxed, except bath and kitchen which are painted or varnished. Oak floors are intended in main rooms with beamed ceiling and paneled wainscot in dining room. A disappearing bed in living room wall is provided.

The cost, including plumbing for kitchen and bath, is estimated at $1,200.00.

Design B-391.

Our illustrated bungalow has a frontage of 42 feet and a depth of 36 feet over the piazza. The height of the story is 8 feet, 6 inches, which allows the use of outside studding 8 feet high. All rooms are on one floor. The roof is low with a wide reach of cornice and no attic space



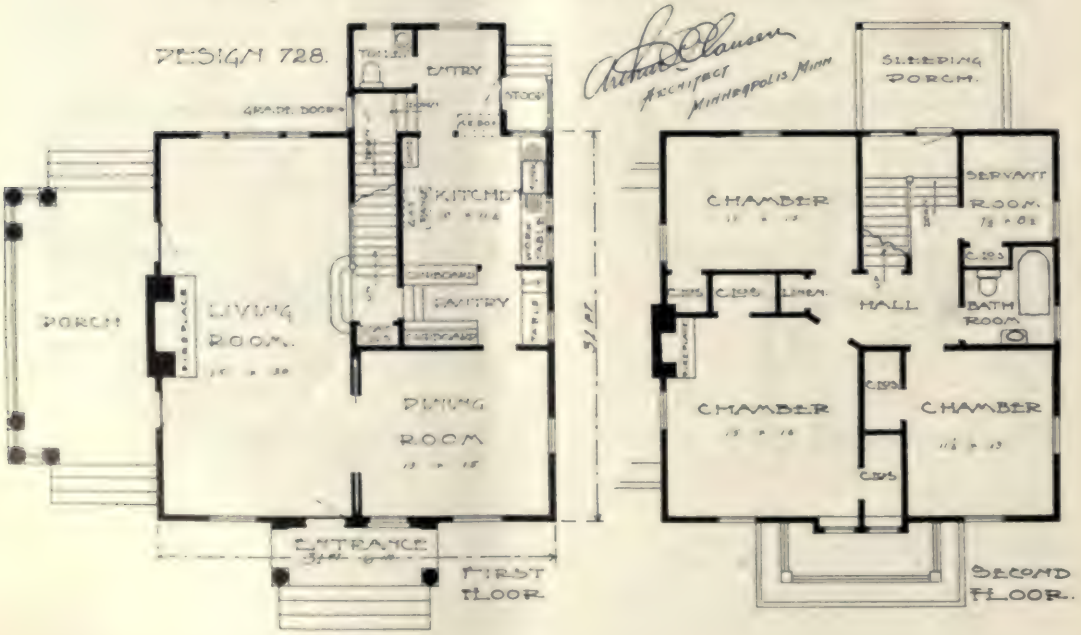




Arthur C. Clausen, Architect.

DESIGN B 386

A Commodious Square House



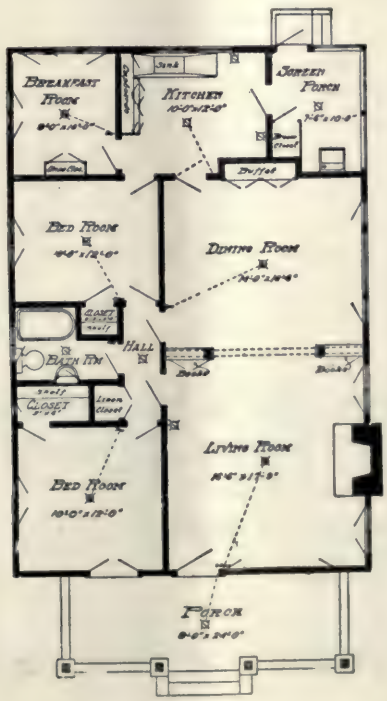


The Bungalowcraft Co., Architects.

DESIGN B 387

A Low Rambling Bungalow

for use. It is designed to have a basement under the main part of the building. One central chimney providing flues for heating apparatus, fireplace in the living room and flue for kitchen. There are two bed rooms located on the rear, one in each corner, well lighted and ventilated. The living room and dining room open together and also open onto the wide front piazza with French windows. There is a convenient sleeping porch opening back from the piazza on one side, connected with one bed room and the dining room. The exterior is covered with wide drop





John Henry Newson, Architect.

DESIGN B 388

Design for a Double House

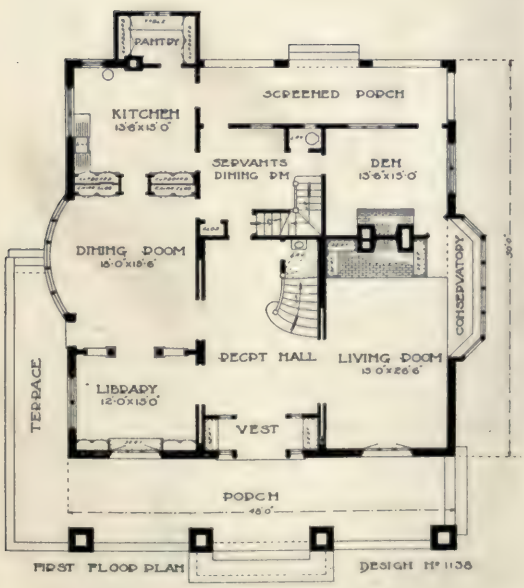
siding of cedar or fir and stained. The striking feature of the exterior is the boulder wall carried around the piazza with heavy boulder piers on each corner supporting the roof and pedestal on each side of the steps for flower vases. The piazza floor is of cement concrete. The roof is shingled and stained red and all trimmings painted white. The floor is of fir and inside finish, doors, casings and so forth of fir and stained with dark Mission oak color. The walls are plastered and tinted or papered. The estimated cost is $3,500 exclusive of heating and plumbing.

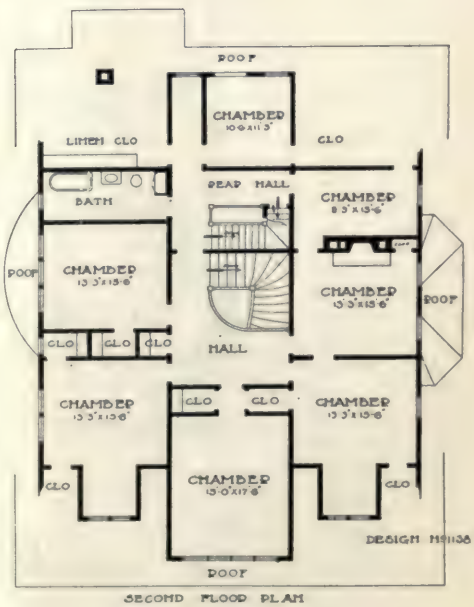




DESIGN B 389

A Two-Story House with Bungalow Lines



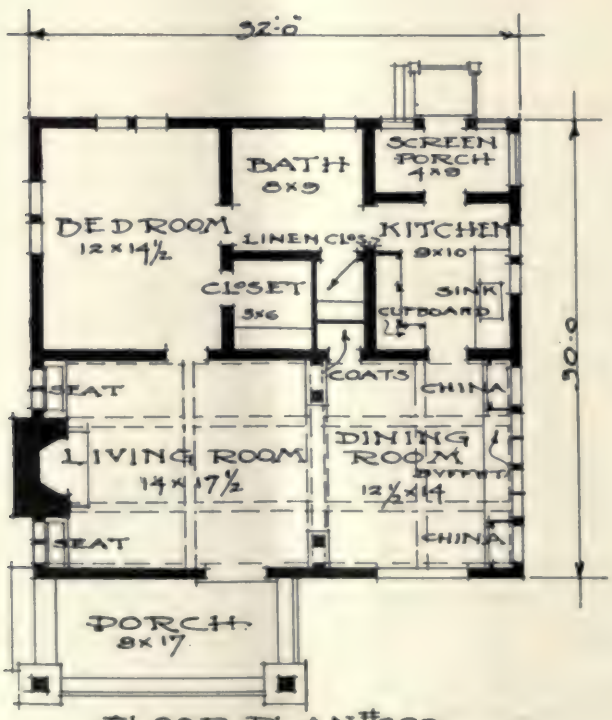




W. E. Coolbaugh, Architect.

DESIGN B 390

A Low Cost Bungalow



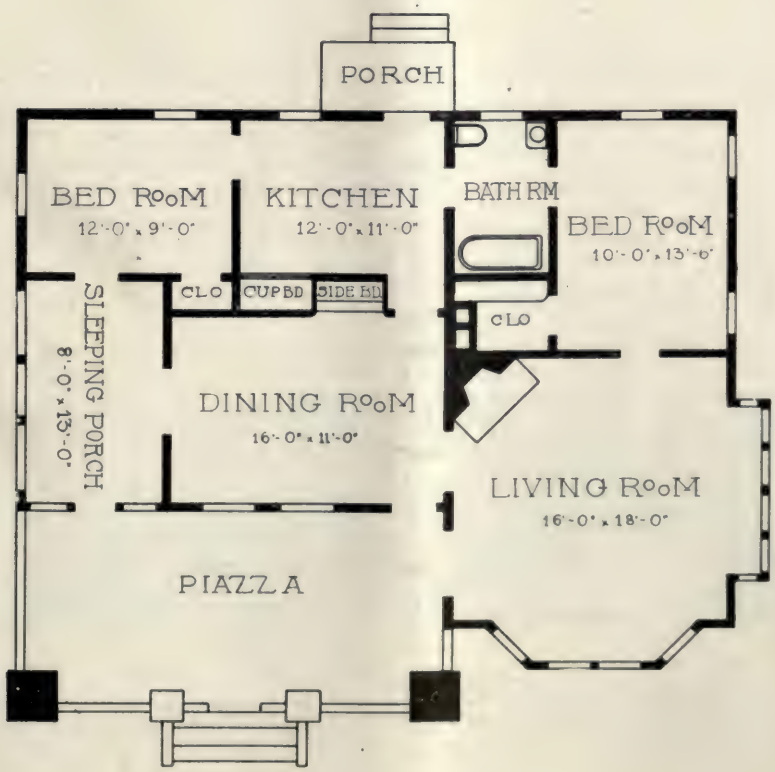
FLOOR PLAN #829.



Chas. S. Sedgwick, Architect.

DESIGN B 391

A Unique Bungalow





Conducted by ELEANOR ALLISON CUMMINS, Decorator, Brooklyn, N. Y.

Concerning Bedrooms.

DELIGHTFUL and artistic living and diningrooms are common enough, but how seldom one sees a really comfortable bedroom which is esthetically pleasing. Bedroom furniture has not kept pace with the advancement in other sorts and most women are obsessed by the idea that a profusion of muslin and lace is essential to a sleeping room of any pretensions. Then, too, we Americans have a deplorable habit of using our bedrooms for sitting rooms, so there is apt to be a confusion of books and sewing materials unpleasing in the extreme.

Simplicity ought to be the keynote of a bedroom. That and comfort are the essentials, and without them you spend your money for nought. The bedroom is primarily a place for rest. The eye of the sleeper, wakened in the early morning, should not be confused by the sight of a multitude of objects, of a jumble of colors, of a confusion of broken lines. Soft color, simple lines, empty spaces, all these are helps to thorough rest. The ideal bedroom has nothing in it but a bed and a bedside table, and opens into a dressing room as luxurious as the purse will allow, but the ideal is not often realized.

In building a new house, a great deal can be done for the bedrooms by careful planning. A generous closet with many drawers will obviate the need and expense of a bureau or a chiffonier at a small cost, a cupboard, perhaps four feet high, can be carried along an unbroken side wall, and windows set above it. Such a cupboard will hold the entire wardrobe of the man of the family and leave room to spare, besides being, with its panelled front, an effective part of the room. Similar cupboards in the children's rooms are useful for toys and books, as well as for clothes.

The Color Scheme of the Bedroom.

Most bedrooms haven't any, but every room gains by having at least a suggestion of definite color, carried out through all its appointments. The writer's personal taste is for a plain wall of definite color in a bedroom. Naturally one would not choose bright red or olive green, but there is a wide range of colors, sufficiently deep in tone not to look faded. A clear yellow, not too bright, china blue, a soft yellowish pink, old rose, pinkish lavender and willow green are any of them charming and have so much character that they furnish the room fairly well in themselves. Add to the list a brighter blue, to be used with birdseye maple, and apple green, which is charming with silver maple, and you have a wide range of choice. Almost any of these are satisfactory with a block printed chintz or with small patterned cretonnes with light colored grounds. If you mean to use highly colored and strongly patterned cretonne in your bedrooms, you must choose a neutral tone for your wall, either a white paper in two or more tones, a buckram paper in tones of tan, or gray. Of the papers which would be classed as gray, the best are those in which the tint is produced by an arrangement of black lines of varying thickness and spacing. But these must never be used with a cotton whose groundwork is cream or ivory.

The all white bedroom has a dainty charm of its own. Matted floor, white fur rugs, white and gold or clear glass toilet ware, scrim or dimity hangings and enameled furniture make up a very refined whole. But it is not a room for



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This handsome Beaver Board dining-room is in the home of Geo. W. Klewer, member of a prominent architectural firm in Chicago.



general use, nor even for all the year. It is at its best in a country house, used only in the warm months, and for a guest room at that. Far better edge the white walls with a nosegay border of blue ribbons and pink flowers, carrying it around each wall and repeat the colors in one or two pieces of chintz covered furniture and in side curtains and valances at the windows.

The Essentials of Bedroom Furnishings.

First the bed, or beds. The tendency is to low headboards, and some of the best looking beds, wooden or metal, have head and footboard the same height. Very often an old bedstead can be transformed by cutting down the headboard. This is easily done by shortening the legs and knocking out one or two of the connecting boards. The piece of metal which receives the sides of the bed must also be readjusted. It is astonishing how one of the old-fashioned bedsteads with an abnormally high headboard can be transformed in this way, and very often objectionable, glued on ornaments can be concealed by the pillows.

The writer is inclined to think that the effect of the room is better with a double bed than with two single ones, but it is quite hopeless when the two beds are of more than single width. The person who cannot adjust himself to a three-foot bed needs to have a room to himself.

The proper place for the double bed is with its head against the long wall of the room. If the room is wide enough a couch may stand at the foot of the bed, otherwise the space is best left vacant. On the other hand, the single bed looks best with its side to the wall and its head toward the windows. Occasionally one sees a bed standing cornerwise between two windows. Such a position may be necessary, but nothing can be uglier. If you must save room in that way, dispense with a bedstead and substitute a draped couch.

Bureau or Chiffonier.

Nothing is so satisfactory as a bureau of the right height and of generous width, with a large mirror, standing between two windows. It holds less than a chiffonier but its adaptation to limited quarters is less evident. Its deficiencies may be supplemented by closet drawers or by a covered box under a window, or, if there is room, by a chiffonier in some other part of the room. But do not have a bureau and a chiffonier, both with attached mirrors. It makes the room suggest a furniture warehouse. Without a mirror the chiffonier is a dignified chest of drawers. With the mirror it is a device for the saving of space. If you want a second mirror get a chiffonier with a circular or oval mirror, remove the standards and hang the mirror over the mantel-piece.

For the small bedroom occupied by one person the best effect is to be had by using a small dressing table, with an attached mirror and a chiffonier to hold clothes. The dressing table gains very much by having a chair of its own. When such chairs are bought specially they have low backs, about half the common height. A common chair can be transformed by having its back cut down, padded and covered to match the seat.

Bedroom Tables and Chairs.

One must have a bedside table, preferably in two stories. A very good looking bit of furniture is made from a square wooden washstand, such as are common in second-hand shops, and seldom bring more than fifty cents. Remove the top, paint or enamel the legs and cover both shelves with cretonne, carrying it plainly over the sides. It will have the advantage of standing firmly, while most tables of that size wobble.

The best bedroom writing table is a hinged and bracketed shelf under a window, with a stool before it. The sill will hold a tray for pens and ink and a blotter with a pocket at one end for paper can be fastened to the shelf. When not in use it is dropped down against the wall below the window and is out of the way.

Every bedroom ought to have one comfortable chair, easy chair or rocking chair. The ideal thing for a large room is what is called the grandfather's chair, made first by Heppelwhite, with extremely high back and winged sides. Failing that, a stuffed chair discarded from the living rooms will make a brave show in a cretonne slip cover. Another desirable

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thing is a chair of about half the ordinary height, suited to those emergencies of the toilet which demand a lowly position. A capital chair for this purpose is a high backed splint piazza chair, upholstered and with its legs cut off.

The Bedroom Screen.

A folding screen of some sort is a necessity, if the room must be used for dressing as well as sleeping by two persons, and may be either of the cretonne of the furnishings, of green or brown burlap, or be merely one of the effective Japanese ones, which can be had in colors to match almost any scheme. The designs are the typical ones of cherry blossoms or chrysanthemums, the frames substantial, either black or natural wood, the cost, for the five-foot height, about $4.50. Some very artistic ones have panels in monotone, white, grays and black, and fit into almost any room. For a small room, the wardrobe screen with its railed top of swinging pegs, is useful.

When a screen is covered to order a recent idea is to have the two side panels entirely of a figured material while the central one is of plain colored linen or denim for two-thirds of its height, and of the figured material for the remainder.

When the washing apparatus can be concealed behind a high screen it can be of the simplest sort, and there is no more convenient washstand than a deal kitchen table, enameled white, and with a shelf fastened between the legs about a foot from the floor.

Bedroom Pictures.

Too often the bedrooms are filled with the pictures which have grown shabby downstairs, or have been replaced by newer ones. Better have no pictures at all than such survivals. As a matter of fact, if the wall is good in color and surface the pictures may very well be limited to one above the bed and another at the chimney piece, if there is no mirror.

One of the most satisfactory pictures to hang over a bed is one of the circular Madonnas, of which there are several by Botticelli. The Meyer Madonna, by Helbein, is another appropriate one, both in form and sentiment. For the over-mantel nothing is any more satisfactory than a landscape, either a watercolor or a reproduction in color.

Particularly suited to a bedroom, in delicate colors and dainty in all its appointments, are some of what one may call costume pictures. A good many such have been published of late years, often reprints from magazines, and most of the picture stores have an assortment. Some of the work of Gari Melchers in this line is specially interesting. As a rule, pictures of this sort should have white mats and narrow gilt frames. When pictures in black and white are used on a white, cream or gray wall, they look well framed in a narrow band of enamel of the dominant color in the room, rose, scarlet, or blue.

The bedroom is the place for family photographs, if one must have them in evidence. They are not specially decorative, as a rule, and the most satisfactory disposition for them is to put them in oval frames of varying sizes and group them on some section of the wall, placing one specially cherished one in a cretonne frame on the dressing table.

Cotton or Woolen?

I have not said anything about the floor covering. Most modern houses have bare floors and rugs. There are substantial advantages in the painted floor, which can be scrubbed at need, and two or three small rugs at bedside and bureau are quite sufficient. Shall they be woolen or cotton? The cotton rag rugs have been tremendously boomed, they are cheap and at worst inoffensive, while in the hands of a clever weaver they rise to the level of works of art. But like all cottons they smut easily and they are hard to wash satisfactorily, as too often some one color will fade or run, and a general dinginess results.

There are some rugs on the market which are woven of woolen rags in absolutely fast color, and will be made to order to suit any color scheme, without additional cost. Naturally they cost more than cotton, but they are practically indestructible and a very good investment. They are to be recommended to people who want rugs of permanent value, yet cannot afford the initial outlay for Oriental rugs.

Coal Bills Cut More Than ½ in this home.



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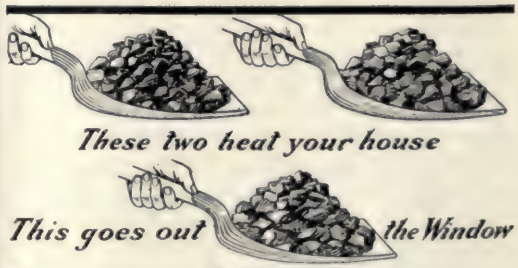
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ANSWERS TO QUESTIONS
ON INTERIOR DECORATION

Editor's Note.—The courtesies of our Correspondence Department are extended to all readers of *Keith's Magazine*. Inquiries pertaining to the decoration and furnishing of the home will be given the attention of an expert.

Letters intended for answer in this column should be addressed to Decoration and Furnishing Department, and be accompanied by a diagram of floor plan. Letters enclosing return postage will be answered by mail. Such replies as are of general interest will be published in these columns.

Rugs to be Harmonized.

A. M. H.—"Am enclosing sketches of south elevation and first floor plan.

"Furniture for livingroom and hall, fumed oak with Spanish leather in browns and greens. Have no couch or davenport. Would you advise getting this in Spanish leather, oak with leather seat and cushions, or all tapestry? Have a Wilton rug 10x10 with two 60-inch rugs—a perfect match—in dark green with small pattern in tones of brown outlined in black. Also have a 12x9 body brussels in a lighter green and tan with touch of black and deeper green border. A 6x9 Axminister Oriental red and white predominating a smaller rug of similar design but in blue. Would like to use these rugs—but could get one new one. Thought of using the 9x12 Brussels in diningroom. The walls above plate rail with landscape frieze (autumnal forest) and deep cream ceiling. The green Wilton and smaller rugs in livingroom, but don't know what to use on walls of this room."

Answer—Taking up first the question of the exterior, if a white trim is desired, then we would make the board siding a light cigar brown and use brown brick for foundation wall. The plaster section a deep cream and the trim cream rather than pure white. The roof shingles should be a lighter brown. The shades should be cream.

In regard to color of interior walls, inasmuch as the oak and Spanish leather demand a strong wall, we would use on the livingroom a paper in dull sage green in a self-toned conventional design. Such a paper has the effect of a plain wall, but is not so bald. As this room is well lighted, it will bear such a wall excellently well and it will be in harmony with the green shading of the Spanish leather and the rugs. We think a davenport in Craftsman style with loose cushions of the Spanish leather would be better than tapestry, all things considered. The hall would be excellent in one of the new irridescent papers showing red, green and bronze shadings mixed and blended. The red and white rug would be difficult to place here, however, though the one with blue in it could be used up by the bookcases.

Your idea for the diningroom is very good and we would suggest the Berkshire frieze illustrated in the April issue of smaller type. Curtains of apple green Sundure would be a good choice here.

The white woodwork is all right for second floor and for upper hall; the break can be made at the head of the stairs. The wall of the upper hall could be papered with a pale tan grass cloth. We would advise using the tan and green and rose border rug in the southwest bedroom, with the Toona mahogany and a pale green chambray wall paneled round with a narrow rose banding. There is a charming Madras white, with narrow stripe, of pink rosebuds and green leaves, for this room. In the pink and gray room let the white woodwork be slightly grayed and one of the gray and rose papers described in the April number, used on the wall. The curtains could be plain, pink Sundure over very sheer plain white scrim.

Finish of Woodwork.

I. H. H.—"We are building a new home and while we have a good architect we would like to have your advice in regard to interior woodwork. Will enclose drawing of lower floor. We have furniture for the drawing room, which is rosewood. The livingroom to be furnished in "fumed oak" with Spanish leather



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davenport, chairs, table, etc., to match. The diningroom furnished in mahogany. The livingroom to have beam ceiling. Now what I want to know is how shall we have the woodwork stained in these rooms?"

Answer.—Inasmuch as you desire the upper hall woodwork to be white enamel and the lower hall appears to receive no direct light, we are tempted to advise white enamel for the lower hall also with a wall decoration of gray landscape paper. On the other hand the hall and livingroom opening from it would preferably receive the same finish. On the whole the latter is probably the best, though we dislike the "patchy" effect of so many different finishes. The parlor or small drawing room with its rosewood furniture must surely be finished in ivory, and the diningroom in white enamel. If the fumed oak furniture described be used in livingroom, the woodwork could be antique ivory with cap moldings of fumed oak.

Either white enamel of flat white is always a good choice for sleeping rooms. Let it be white for the room finished in mahogany, but decided cream for the bird's-eye maple. The room with the Circassian walnut should be an oyster white showing a decided gray tinge.

Cottage Wall Treatment.

R. A. Y.—"I am always very much interested in the "Interior Decoration" section of your magazine. Would you kindly give me suggestions in the redecorating of our little home?

"At present we are living in a little four-room house, and we selected our few pieces of furniture with a view to utilizing it in our new home a few years hence. My idea is to keep the rooms simple and plain, and the decoration of the walls and woodwork inexpensive.

"The diningroom and livingroom are dark green paper with moire ceiling and Georgia pine woodwork, floors painted yellowish tan. Kitchen was dark green kalsomine, which I have had refinished a light gray.

"The bedroom I have papered a light yellow with white enamel woodwork and furniture—the floor painted tan and rag rugs. Curtains white muslin with flower border to match cretonne on window seat and rocker."

Answer.—Replying to your recent favor, you are quite right in thinking the dark green altogether a mistake for your rooms. In the bedroom, however, it would be a great improvement to paint the floor a dark water green. The white woodwork and furniture need something to tone them up. If the cretonne has a lot of green in it, the effect of green, yellow and white will be very pretty.

The diningroom being northeast, gray is not so good a choice, as a pale, warm tan for the walls and lighter shade for ceiling. A frieze with rose color would be excellent, but should be a more conventional design than apple blossom, to harmonize with Mission furniture. Since part of the woodwork in diningroom is already stained brown, we would by all means treat the rest of it to match. We would much rather have a woven rug made from the old carpet than try to use it in the way you suggest.

In the livingroom the ecru walls and brown woodwork would be excellent as these rooms open together. We would have the same ecru ceiling and would then emphasize the greens in the rug, in all the other furnishings, door draperies, chair seats, cushions, etc., and especially, repaint the floors dark green.

Suggestions for Hall.

C. H. D.—"I enclose sketch of first floor of our home. We intend to get same papered this spring and would like to have your suggestions for parlor and hall as to what would be suitable, submitting samples if possible.

"The stairway mantle and woodwork in hall and parlor is of oak—golden oak. The floors hardwood and tiling on mantle in hall olive green, in parlor white. In the diningroom the woodwork is mahogany finish, red paper. We now have a green in parlor. What would you suggest for paper, draperies, etc., also what furniture in hall?"

Answer—Replying to your inquiry, if the red paper is to be retained in diningroom, a paper of considerable strength should be used in parlor, though not a violent contrast like red and green. Taking into account the golden oak wood-



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ANSWERS TO QUESTIONS—Continued

work also, we think a paper showing blended tones of golden tan with hints of dull olive green would be the best choice and we would carry the same paper through the hall. Olive green rugs and draperies would be in harmony. The hall seat cushioned in plain olive green corduroy or velvet.

The only furniture suggested for small hall is an oak table for card tray or a gentleman's hat, with a mirror above furnished with hooks. Possibly a hall chair with high back.

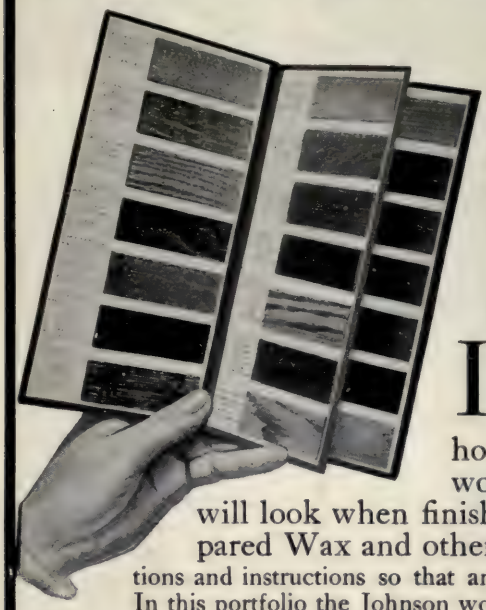
Mrs. G. M.—Enclosed please find stamp for reply also floor plan of an old repaired house.

Would like color suggestion for woodwork and walls. The walls to be painted in living room and dining room.

The living room has a southwestern exposure. The furniture in the living room is mission black.

Ans.—You omitted an important detail in your description, viz., the character of the woodwork, whether hardwood or pine painted. Since you ask "color suggestions for woodwork and walls," we infer the woodwork is to be painted. Inasmuch as the living room furniture is so severe, it is advised to reconsider the determination to paint the walls, as a painted wall is hard and cold and taken in connection with black mission furniture, would give a severe, unlivable effect. If the woodwork can be stained, it is best to use a soft brown, but brown paint is inferior looking for interiors and if painted, a soft dull green is preferable. With this, use a two-toned, self-figured design in a textile or fabric paper in greyish tones and make all your furnishings green, such as rug, draperies, etc. The same paint or stain is advised for dining room woodwork, with walls painted a lichen green. The kitchen woodwork should be white. The lower four feet of the wall can be painted Delft blue and the upper wall and ceiling white or cream. The woodwork in all the bedrooms should be white and the walls papered in pretty, light colors. The back bedroom with north light and rosewood table, could have paper with cream ground and narrow banding of pink roses running round ceiling angle, top of baseboard and down corners.

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Storing One's Goods.

THERE are few families in which at some time or other the necessity of breaking up and storing the household effects does not arise. In most cases it is the exigency of a lifetime and has to be met without any assistance from previous experience. At the best, storage is a matter involving considerable expense, but this item can be much reduced by judicious planning.

The Matter of Insurance.

One point which is not understood generally, and which has sometimes led to serious loss, is that the fire insurance companies will not generally assume risks on goods which are not stored in fireproof warehouses. The comparatively small number of these fireproof warehouses keeps the rates of storage up, but there is no escape except by taking the risk of losing the insurance in case of fire. And storing with one of these companies involves employing their vans as well.

Another detail, equally important, is the notification of the insurance company of the removal of goods from house to storage. A good many people have lost all their earthly possessions by neglecting this precaution.

The Problems of Storage.

These details well in mind, the first consideration is what to store. Courage is required to discriminate between the permanently valuable of one's goods and the worthless. The line needs to be drawn most often in the case of carpets and rugs. The bedroom carpet or matting which looks quite presentable after several years' use is too apt to merge from storage in a condition such as to preclude its ever being used again. If it is cleaned before being sent it will probably be damaged beyond recovery in the process, if it is sent dirty the moths will get it. Far better to send all floor coverings not above suspicion to an auction room. It has happened to the writer to know a number of people who have sold their goods at auction and she has been astonished at the ready sale of carpets and often pretty poor specimens at that. There is a certain class of the population to whom a carpet, especially Brussels or tapestry, is one of the outward and visible signs of respectability and its members are the people who buy secondhand carpets.

Carpets and rugs in good condition should be cleaned thoroughly before being sent to storage. If the cleaner takes them from the house and delivers them when done at the storage warehouse you save cartage charges. On the other hand, you have no opportunity to do anything to protect them from moths. It is more satisfactory to have them returned to you and to roll them up separately, using an abundance of red pepper or something equally disagreeable to the moths. Each rug or carpet should be rolled up separately as a single moth infected rug will ruin all the rest of a roll.

Mattings deteriorate, especially the different sorts of grass weaves. It may pay to store them for six months, but not for a much longer period. But a good, clean, Oriental matting is worth keeping and should be wiped clean, as well as shaken, and the roll sewed up in burlap.



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In deciding what to keep and what to send to be sold, it is well to make a careful estimate of the comparative cost of storage and replacing, deducting from the latter item the probable selling value. When you apply this test you will probably find that most of the kitchen utensils will go to the auction room. Nor will it pay to store for any length of time the vast assortment of odds and ends which accumulate in most households. One may well reflect at such a time on the small number of things that are either really valuable or indispensable, and on the kindred truth that there is sure to be someone to whom her rubbish will be a treasure. The valueless things have a place and a use in one particular household scheme, but the chances are one in a hundred that such a scheme will repeat itself, and it is hardly worth while keeping them on such a remote possibility.

The Actual Packing.

Naturally one packs for storage much as one packs for any other removal with this difference that the goods may not be unpacked for many months, and that it is desirable to get them into as small a compass as possible. Moreover personal possessions, clothing and one's small belongings seldom go to storage, which makes things somewhat simpler.

Perhaps the most important point of difference is in the necessity of protecting stuffed furniture and bedding from the dust. With a sufficient supply of papers, string and burlap any intelligent person can do this as well as a professional packer. The entire surface of stuffed furniture should be covered with layers of newspapers pinned and tied in place, and a burlap covering sewed on. Naturally the furniture should be as clean as possible and a dusting of white pepper is not amiss in case a moth might lurk forgotten.

The same treatment should be given the mattresses. A simpler way is to arrange to have them made over a few days before your goods are taken out of storage, so that you begin housekeeping again with them in perfect condition. Blankets should be washed and the easiest and safest way to packing them is in the tarred bags, which are sold in department stores to pack bulky articles in. A sprinkling of camphor may make assurance doubly sure. Pillows should be cleaned before being stored, tied in bundles of two or four and sewed up in burlap.

With polished furniture it will be sufficient to wind rolls of paper around all the exposed parts, holding them in place with string. If old comforters are available they are admirable for protecting the upper parts of chairs, sofas or tables. A feather pillow wadded securely into an unstuffed chair will protect its inner surfaces effectually. The professional packers do this in more shipshape fashion than the amateur, but not more efficiently, given an abundance of packing material and of string.

It is worth while, with a view to reducing the storage space required, to study ways of using all the interior space of furniture. For instance, a tabouret turned upside down will hold a lamp of moderate size nicely, the spaces around it being filled with paper or small soft articles, such as the contents of the piece bag. A large picture with a deep moulding can have the space from the glass to the outer line of the frame filled up with smaller pictures.

Books should be packed in a good many small boxes, rather than in large cases, and the storage people will bless you if the boxes are provided with handles of iron, leather or rope. Small books of no special weight may very well be packed in the cartons of heavy corrugated paper in which packages of cereals are packed. The grocer generally throws away such things, but will save them if he is asked. They are equally useful for small pieces of bric-a-brac, little pictures, and a great variety of small things.

To sum up:

Make sure of complying with the regulations of the insurance companies.

Have your things clean before you store them.

Pack as closely as possible.

Don't store rubbish.

Does Preserving Pay?

These pages will be read while the early autumn fruits are still in the market. It may be a question whether it



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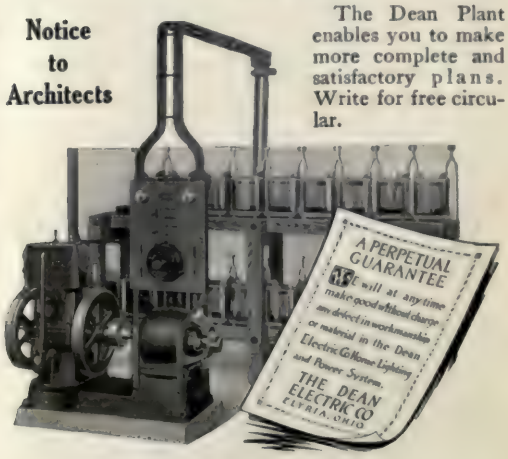
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pays to put up such things as strawberries and raspberries, or even to make currant jelly. The former are given to "working" and the gift of knowing at just what stage of ripeness currants are sure to "jell" is not given to everyone. But the fruits of late summer and early autumn can generally be bought cheaply in quantities and are easily preserved, and the saving over even the cheapest grade of canned fruit is a sensible one. The writer has had occasion lately to figure out the cost of homemade jelly and it was a fraction under ten cents a glass, with the Woman's Exchange charging twenty-five cents for the same thing. Doing things for one's self there is always the chance of a bargain, getting a basket of peaches or pears below cost on Saturday night.

And apropos of pears, there are some of the coarser varieties which are rather flat and tasteless when used by themselves, which are excellent in combination. Pears have the quality of retaining their shape no matter how long they are cooked, also of taking any flavor stronger than their own. By using a large quantity of green or crystallized ginger and their weight in sugar you can cook pears into a sweetmeat hardly distinguishable from Canton ginger.

Again, if two pounds of pears are added to one of the far more expensive quince, and fruit and sugar cooked until they are dark red, it will be impossible to tell either from taste or looks which is which. For this purpose a pear of rather coarse texture is far better than the sweet apples so often used.

The Limitations of Strength.

Since muscular strength is not the heritage of the educated woman who must do housework, she must husband her resources and do hard things in an easy way. And how much easier this is if it is thought of at the beginning, if the arrangements of the house are so planned that things can be done with the smallest possible expenditure of effort. This involves the whole question of the planning and equipment of the kitchen. Is not the great popularity of apartment house life largely due to the ease of doing housework in the tiny kitchens? It is possible to do cooking efficiently with the minimum of movement, and a large part of the heavy work of housekeeping is eliminated at the start. The gas range and the central hot water supply are still further helps. Other points not always attended to are adjustment of sinks, tubs and closets to the height of the average woman, the installation of ash shoots and dumb waiters, and of speaking tubes. Why is it not possible to instal in the private house of modest pretensions the convenient speaking tube and door opening arrangement of the apartment house? Certainly it would save endless running up and down stairs on needless errands.

Another convenience costing but a trifle, if put in when a house is built, is an elevator running from the cellar to the top floor. It should be large enough to carry a trunk and the openings on the several floors should be at the floor level. An elevator would seem to be an essential in a house four stories high, when all the floors are in use, but it is quite a rarity. An important point in connection with installing a dumb waiter is to see that the weights are heavy enough to allow of its being readily stopped when heavily loaded, as serious accidents have resulted from the downward rush of a dumb waiter. A check at each stopping point is also essential.

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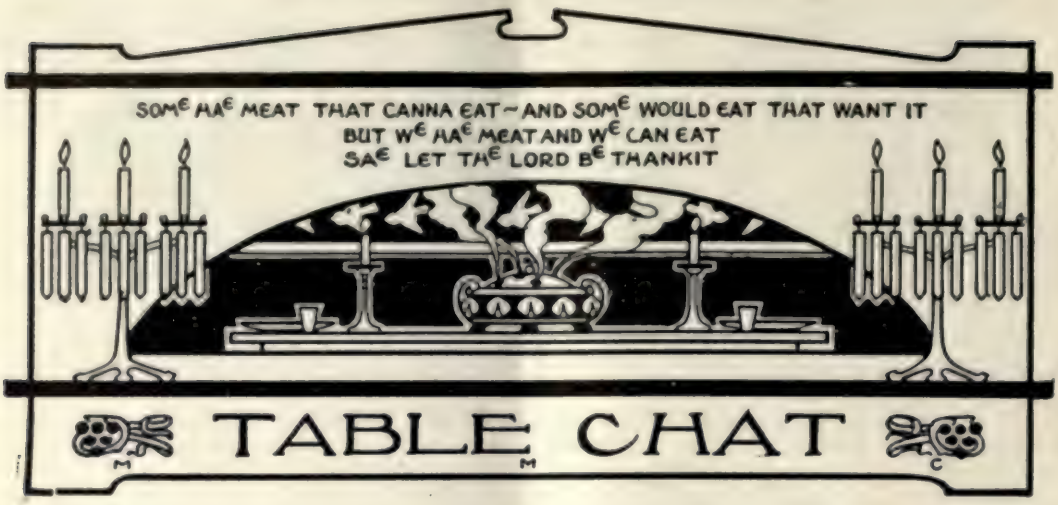
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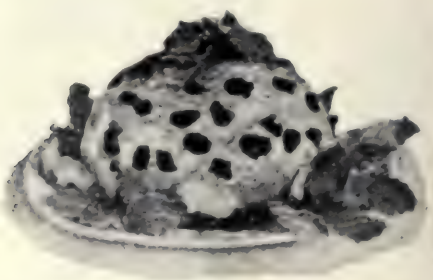


Christmas Frolics and Fancies

By the Table Chatter

(Illustrations by courtesy of McCall's Magazine for December)

THE Table Chatter, after long absence—is back at her old post—catering for the readers of Keiths Magazine. Right heartily she wishes all her readers a Merry Christmas and a Happy New Year!



Christmas Plum Pudding.



Potatoes in Holiday Style.

The Table Chatter believes in Christmas, and in spelling it without an X. It is a day to celebrate gladness, the Birth and not the Cross. And if we can't spend time to write the word in full, we don't deserve it. Yes, we believe in Christmas; in the good will and gladness of it; in the charming fancies and superstitions; in the Christmas carols and frolics; in Santa Claus and stockings; in Christmas trees and plum puddings; in evergreens and red candles; in the chatter of uncles and aunts; in the days and days beforehand, when the children are going round full of their "secrets."

But we do **not** believe in the abuses of Christmas, the travesties upon the real spirit and meaning of the word. Surging in and out of the seething crowds, striving to get something cheap, yet showy, to pay back last year's vases and card cases.

No—let us go back to the day of simple gifts, of a blue sugar dog and an orange



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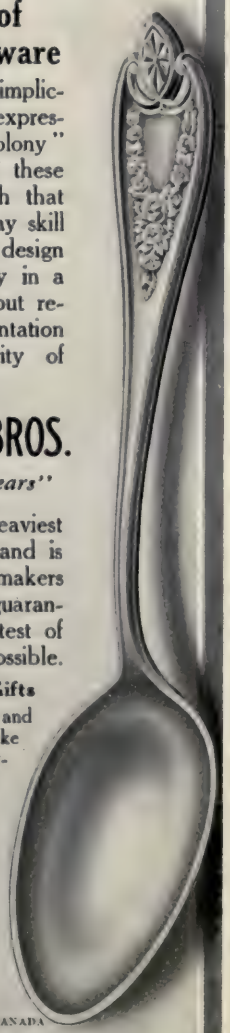
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in the children's stockings; of a flower or a bon-bon for the friend.

Ah, me! perhaps we have lost the road back, even though we search with tears.

* * * *

But now the Table Chatter must concern herself with the Christmas dinner, before which even the Tree bows in obeisance.

Not for us the Christmas dinner "of them
big hotels,
Where they change plates, and let ye live
on smells."



Santa Claus Cake.

First of all, if you want a real success, stick to the good old-time dishes for your menu—the roast turkey or goose, the cranberry sauce, the cold slaw with cream dressing, the mince and apple pie, the plum pudding—and if you are a genuine Southerner of the old school, you will top off with a foaming egg-nog and black fruit cake. How you will feel afterwards, is not my affair.

Keep your salad and fish course, your ice cream and bon bons, for other occasions; they do not "belong." The only innovation we may permit, is perhaps to allow you to serve your cranberries as a sherbet, because the red, frozen juice, in the tall, slender serving glasses, is such a pretty adjunct of the Christmas table. For, of course, your table must glow with red, red; all must be brilliant with silver and glass and red and green. Holly, of course; there is nothing better, and a table decorated entirely with holly berries and the shining green is a perfect success.

A very simple but effective decoration is a mirror in the center, with tufts of cotton batting lightly surrounding it. This is sprinkled with diamond dust and gleams like snow. Select choice sprays of holly with many red berries and lay about the snowy shores. In the center stand a low silver dish filled with red holly berries, or a tall one with red carnations bending over and reflected in the mirrow below. Lay a piece of holly at each plate, and when the turkey comes in let him wear a sprig between his folded wings.

If you should be the lucky possessor of your grandmother's old silver epergne, you are in the height of fashion. Place it on a centerpiece of drawn work or Battenberg lace over scarlet silk or sateen, on the white damask. Fill the bowl with poinsettia blossoms, and put red candles in the low-spreading branches. Have shades made of thin rice paper over red, on which are painted holly leaves with round holes cut out showing the red underneath for the berries. The effect as the light comes through will be indescribably soft and brilliant.

A charming and novel decoration to hang under the chandelier, is a bunch of snowballs, made with cotton batting, fastened to stems of fine wire, and powdered first with starch or toilet powder sprin-



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kled thro' a perforated box, and then with diamond dust. The sideboard, too, must be decorated, with small Christmas trees in pots, and wreaths hung in the panels.

The Christmas plum pudding—the grand entree—is not the bugaboo many housekeepers fancy it. It is easily made if one has a good practical recipe, and may be made days beforehand and kept for months afterward. It is just as good as ever when steamed up, and eaten with a foaming sauce. No nicer or more acceptable gift, moreover, can be sent to a friend who perchance cannot compass a plum pudding, than a smaller one when you are making your own, in a new tin melon mold, wrapped in white tissue paper, tied with red ribbon and a holly spray stuck under the ribbon.

* * * *

An ingenious hostess is planning a fun-making Chirstmas plum pudding for her Christmas dinner, which is so good you shall have the benefit of the idea. A large mock pudding is manufactured from brown cambric, much the shape of a huge orange, and in segments like the divisions of an orange. These segments, one for each person—in this case there are sixteen—are held out in shape by a pasteboard lining inside, on the sides of the triangular division only, and lightly stuffed with cotton, so it will push together, and not be a stiff, round ball. A small ring is sewn top and bottom of the wedge, and when all are ready a cord is passed through these rings, drawing them in position. Inside each wedge is a trifling gift with a quotation appropriate to the recipient, and these are made as witty and mirth-provoking as possible. A bunch of holly is stuck in the top, and the pudding is brought in with great ceremony and eclat. The hostess merely unties the string, and slips out the wedges until each is served. When they have all been inspected and enjoyed, the real Christmas pudding is brought in.

And here follows the recipe for it, possessing the great merit of being awfully good and yet not too rich to be eaten.

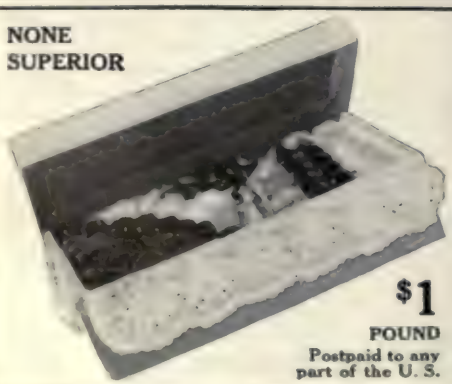
English Plum Pudding.

Mix 1½ pints grated bread crumbs, soft, not dried, 1 pint chopped suet, 1½ cups seeded raisins and the same of currants, ½ cup sliced citron, 1 scant cup brown sugar, ½ teaspoon salt, ½ grated nutmeg, 5 eggs, 2 even tablespoons flour moistened into a thin batter with milk, ½ glass brandy, in the order named. Put in a close covered buttered mould, and boil or steam four hours.

* * * *

If perchance you are to perform the gracious rites of Christmas hospitality by a Christmas supper instead of a dinner, lay your table with a cloth of red linen, the brilliant Oxford red used for shirt-waists. Now let the candles be white. with red shades, and the china white also. Let the table gleam with cut glass and clear crystal glass, and the center piece of lace over shining white satin, with cut glass vase filled with scarlet blossoms. Then when a wood fire glows on the hearth, and red gas and candle shades make a soft, rosy brilliance, the smell of fir and balsam perfumes the air, nothing is wanting but a gay group of Christmas carolers and the Spirit of Christmas at the window.

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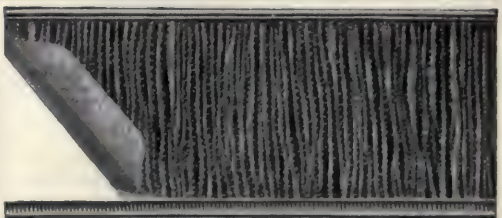
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Write for your copy now, while the matter is in mind.

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Dusting of Cement Floors.

THE fact that so many of the cement floors in our reinforced concrete buildings today cause worry to the architect, contractor, owner and tenant, by the surface dusting off with slight wear, thus becoming a menace to machinery, employes and stock, has necessitated a study of the cause of this trouble.

Upon investigation it will be found, first—that the most serious cases are on floors above the basement, which fact would lead us to believe that the concrete has not had proper conditions for the thorough crystalization of the cement. This to a certain extent is true, for the basement floor has been in contact with the damp ground, and, not being exposed to heat and air both below and above, has not had a chance to dry out so rapidly.

On the more exposed upper floors, however, the drying out is much more rapid, the top dressing being especially affected and thus being given a tendency to become soft and crumbly.

There is another cause, too, for this dusting, and that is—improper troweling, such as over troweling, or troweling while the initial set of the cement is taking place. For by troweling, a suction is formed that disturbs the particles, which is as injurious as the breaking up of a bond after it has formed. Lack of protection of floors in cold weather, and the freezing of the surface, will also cause this top dressing to scale and dust off.

There is, too, a general cause of this trouble in the use of sand, not carefully inspected, in that in the troweling, foreign substances are brought to the surface that will not incorporate, and prevent the thorough bonding of the sand and cement.

To overcome this difficulty, contractors have frequently had to take up large surfaces of floor and relay, and then find the same trouble, and generally end in condemning of the cement used.

It is with the intent to bring some of these facts to the notice of users of cement in general, and one of the successful remedies for this trouble, that suggested this letter, As an operator I have made many floors hard and crystal-like at very small cost, that otherwise undoubtedly would have had to come up and be relaid, by the simple method of applying a cement coating in liquid form. This hardens these porous surfaces harder than the floor itself, and in addition, makes them impervious to water, uniform in color, and prevents staining or disintegration from the dripping of oil on them. C. T. B.

Cement frequently has several shades of color after it is dried. To make a building uniform in color wash the entire surface with cement made by mixing two parts of Portland cement and one part of marble dust with sufficient water to reduce it to the consistency of whitewash, and apply with a whitewash brush. Wet the wall before applying the wash and keep it constantly wet during the work. This is decidely important, as the wash will not adhere to a dry wall.

Cement and Engineering News.

Smoothing Porch Posts.

I have built a concrete porch, using a mixture for the concrete posts which was too coarse. The result is that the posts haven't the smooth finish which they should have. Can I go over these posts with a fine cement wash and get a smooth surface? S., Wisconsin.

There is no reason why you should not use a thin cement grout, applied with a brush, to the pillars, unless the pillars are very rough. If they are very



Vincent Methodist Episcopal Church, Nutley, N. J. Roofed with Asbestos "Century" Shingles by the late Olive Newcome Elliot, Architect, and the Republic General Contracting Co., Contractors—both of New York City. Reproduced from an Artist's Drawing.

Asbestos "Century" Shingles

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When your roof begins to leak, it means just one thing---

It is getting worn out, and ready to go back on you.

Don't stop with patching it up. *Replace it with Asbestos "Century" Shingles.*

A permanent roof. Good for all time—no painting or repairs.

See your responsible roofer or building contractor about it—and see him *soon.*

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Remember the name—Keasbey & Mattison's *Asbestos "Century" Shingles.*

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rough, then the grout would, of course, not fill up the depressions, in which case you should make a thin mortar and apply the mortar with a wooden float. Do not trowel the surface any more than is absolutely necessary, because if you do there is a likelihood that your coating of thin mortar will crack. Whichever way you fill the pillars, great care should be taken in curing the grout and mortar. When this has been applied and the mortar has taken its initial set, wrap the pillars in burlap or some such material and keep them wet for several days. This should be done to avoid checking and cracking.

Simple Test of Cement.

What simple test can be made on cement without employing laboratory methods and apparatus? Some cement has been received here, and is now on the market, which is not up to the standard, and it is necessary to give some test to the cement shipment before the cement goes into the work. S., Nebraska.

Briefly, the best way to test cement without laboratory apparatus is to make the cement up with water in such a way as to form a pat about 3" in diameter and about ½" thick in the center, tapering it to nothing at the edges. This pat should be spread out on glass and the cement and water permitted to dry out, keeping the pat from sun and wind. The behavior of the cement can be watched from all sides, in this manner. If the neat cement and water set promptly and do not crack or blister in curing, it is a fairly good indication that the cement is all right. You must understand, of course, that this is merely a rough test and where any considerable quantity of cement is to be used, a laboratory examination is an economy.

Concrete-Cement Age.

Dampness in Basements.

Many cellar floors now made of Portland cement concrete are giving trouble, owing to the permeating moisture. They are continually damp and, owing in part to the constant evaporation from their surface, they are cold. Such a condition may be remedied by the application of an oil-mixed mortar coat to the surface of the old floor. Before attempting to lay the new wearing surface, the old floor should be scrubbed thoroughly clean and should be made thoroughly wet. The bond between the old and the new work will be improved if the old surface be roughened with a stone hammer. A wash composed of 1 part of hydrochloric acid and 5 parts of water may be used to clean the surface. This will dissolve some of the cement from the old work, leaving the aggregate exposed. The acid solution should be left on not longer than half an hour, when it should be completely removed with clean water. The surface should then be brushed with a wire or stiff scrubbing brush to remove any particles of sand which may have become loosened because of the dissolving of the cement.

A mortar composed of 1 part of cement and 2 parts of sand and containing 5 per cent of oil will be sufficiently non-absorbent for the new wearing coat. To strengthen the bond it will be well to apply a wash of grout, made by mixing cement with water to the consistency of cream, before laying the oil-mixed mortar coat. For the ordinary basement floor a 1-inch layer of mortar will prove of sufficient thickness. It will be necessary to keep the new mortar damp for at least one week in order that it may attain its proper strength.

It will be well, if the underlying soil is very wet, to lay a 6-inch foundation of sand, cinders, broken stone, or gravel, compacting these materials well by tamping. In addition it will be of advantage to employ drain tiles in this porous foundation, leading them to a sewer if possible. On top of the foundation should be laid a 4-inch layer of concrete mixed in the proportions of 1 part of Portland cement, 2½ parts of sand, and 5 parts of broken stone or gravel. Before the concrete base has hardened, a top or wearing coat of mortar mixed in the proportions of 1 part cement and 2 parts of sand or stone screenings and containing 5 per cent of oil (2½ quarts per bag of cement) should be laid. This top coat, because of ites non-absorbent character, will give perfect protection from underlying moisture.—Canadian Engineer.

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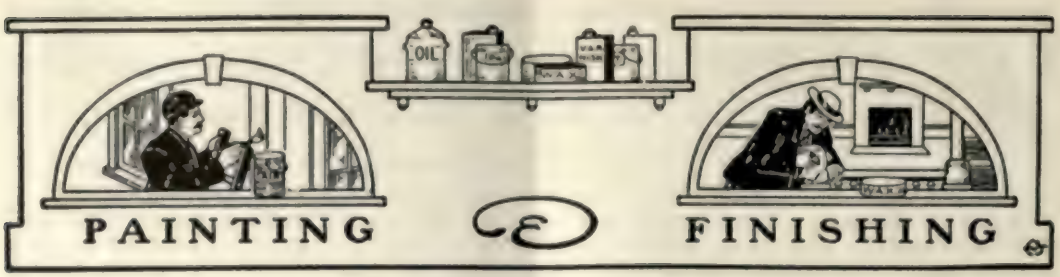
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Some Painting Pointers.

CAREFUL tests have shown that three coats of paint, properly mixed and applied, give a better result than two coats of paint made heavy enough to hide as well as the three coats do.

Two coats of paint, not too heavy and well brushed out, will wear better than two heavy coats not well brushed out.

White paint used on exterior work will not wear as well or as long as tinted or colored paints. Doubtless the pigments effect this improvement.

White paint that was in rather bad shape, exterior, at the end of three years, stood beside red and green paint that was in good condition at the end of that period. To get the best wearing job on outside work use colored paint.

An English painter with years of experience says that in his country they always shellac knots on top of the priming coat of paint, and they never show through.

It is sure that there is no oil today or in sight that will satisfactorily take the place of linseed oil in paint.

China wood oil is being used successfully by the varnish makers, but on account of its flatting quality it is not adapted for oil painting.

Imitation turpentine spirits are being used with some success in certain forms of work, but on account of their lack of solvent action they are not perfect substitutes for the real gum turpentine.

For outside priming paint wood turpentine is even better than the gum product, for it penetrates better. This is the solvent that is destined eventually to take the place of gum turpentine, and only its odor now stands against it.

The priming coat must unite with the structure of the wood and form a bond of union between paint and wood, if it is to hold and wear well. Hence the priming must penetrate well.

The character of a wood must determine the kind of priming that is to be given it. Some woods require more turpentine in the coat, other woods, on the other hand, demand a greater power of penetration in the primer, hence benzol is used here in place of turpentine. Other woods, again, may do very well with only raw oil in the primer, with little lead.

Benzol being a paint remover, it must not be used in any but the priming coat.

Some advise applying benzol to certain woods, and the priming coat, it also containing some benzol. The priming coat in this case must be applied at once after the benzol.

Treating Old or Soiled Floors.

Soiled Waxed Floor.—"The floor has become sticky and streaked with gray from dust." Take a bunch of No. 1 steel wool, dip it into turpentine and rub off the floor carefully, wiping off the old stuff with cotton waste as you remove the wax. Then apply a fresh coat of wax and polish it. It may be necessary to apply two coats this way.

Worn Maple Floor.—"A floor having had three coats of white shellac varnish begins to show wear." Then renovate it every two or three weeks with a very thin coat of white shellac. Remove stain spots with benzine or turpentine. If very bad, then remove the shellac with varnish remover, after which apply shellac varnish or wax, as desired for a finish. Paint and Oil Dealer.

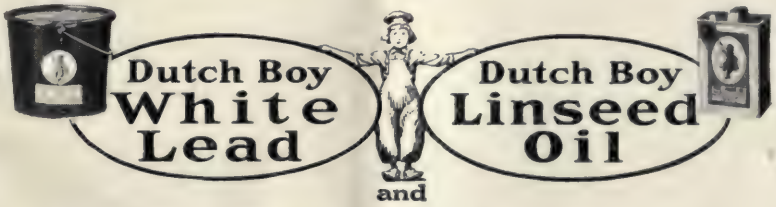
Paint to Prevent Moths.

Question—I have built a store room in the basement of a house, to keep winter clothing and other articles in. The floor, ceiling and half of the side walls are



Use Old-fashioned, Made-to-Order Paint

Good, old-fashioned, white lead paint is like the architecture of the ancients—hard to improve upon. House-owners who want that kind of paint have often been disappointed, simply because either the white lead or the linseed oil was not pure. To prevent paint failure we offer you



Both are pure. We make no second grade of either. The lead comes in our steel packages. The oil comes in "Dutch Boy Painter" cans, one and five-gallon size, sealed at the spout, pure and clean as it came from the flaxseed. There can be no uncertainty about these ingredients. They don't need testing. The reliable painter brings them to your building and with due regard to the conditions he finds he mixes them into "Dutch Boy Painter" *made-to-order* paint.

The paint is equally effective when you wish to fortify your buildings on the outside against the rigors of the winter and when you decorate the interiors for the better enjoyment of winter life indoors.

Let us send you our "Painting Helps 617"

They are packed full of facts every house owner should know about painting and decorating. Included in these "Helps" on decoration is our catalogue of 100 beautiful patterns for wall stencils, from which you may order at great reduction from art store prices.

NATIONAL LEAD COMPANY

New York Boston Buffalo Chicago Cincinnati Cleveland San Francisco St. Louis
(John T. Lewis & Bros. Co., Philadelphia) (National Lead & Oil Co., Pittsburgh)

built of wood (pine). The other half brick.

In your next issue please recommend something to paint the inside of this room with that will keep out insects, something that will be permanent.

Answer—It is probably moths that are to be guarded against. I have just read in an agricultural publication a letter from a woman who tells how she did with a moth infested house she had moved into. She simply applied paint liberally in the closets where she hung clothes, and painted the floors of same, and filled all cracks with paint. She states that it rid the place of moths. Moths do not like paint. Any kind of paint will do for our Louisiana friend's basement room, assuming that the place is dry. In cities furs are stored in refrigerated rooms. Moths don't like cold. Tar or camphor balls they laugh at. They will not eat cotton, hence articles wrapt in cotton or muslin will be safe. It is not the moth, but the larvae that do the eating. Keep the moth from depositing its eggs and there will be no damage done. I have no faith in tar as a paint for this case. Just good white lead and oil paint, stopping all cracks with putty, is all that is required.

A. Ashmun Kelly.

Fireproof Paint.

Mix together 4 lbs. asbestos powder, 1 lb. aluminate of soda, and 1 lb. lime. Stir in 3 quarts silicate of soda. Tint the mixture with any desired coloring (mineral preferred); then reduce with water to the proper consistency for application.

Imitation Fumed Oak Stain.—Boil 4 oz. catechu in 6 pints of water; let it cool; then strain and apply. One coat. When dry, a solution of bichromate of potash, 4 oz. to 6 pints water. But the catechu alone will give a good effect.

Walnut Stain on White Pine.—Walnut hulls make a good stain. Or 2 oz. privit berries in ½ pint of ammonia water. (Standage.) But burnt umber is mostly used. Or Vandyke brown for a deeper stain, and umber and burnt sienna mixed for a certain shade of walnut.

Wax Polishes.

Wax polish is simply beeswax thinned more or less with turpentine. It must be thinned to enable the workman to spread it and polish it. But if made too thin it will not polish well. A condition approximating that of soft butter is about right. The best results come from a thin application of the wax, and plenty of hard rubbing.

Close grained woods especially demand thin wax polish. Open grained woods will take a thicker wax. The turpentine serves to thin the wax so that we can the more readily spread it out on the surface of the work, leaving a thin coating, after which it evaporates. Rosin is sometimes added to the wax, to harden it, and paraffin also; but neither is necessary or desirable.

Wax polish may be prepared by shredding some yellow beeswax in an earthen bowl, which place in another vessel containing hot water, and place same on the stove; be careful about the fire. When the wax has melted you may add turpentine to make it as thin as you wish, though it will thicken upon becoming cold.

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Heating, Lighting and Plumbing

Hints For Household Users of Electricity

By Charles K. Farrington.

ELECTRICITY is used in the household these days for many varied purposes. In addition to the electric light, electric fans, vacuum cleaners, and numerous forms of cooking apparatus are found in many homes. Few of its users have any idea of its properties, however, and many have a fear of it, where no fear should exist. There are also some who from a lack of knowledge take an opposite view; and often treat the apparatus connected with the source of electrical supply without due care.

I have seen people afraid to touch an insulated wire, such as is often used to connect a table reading lamp with a connecting plug or socket. If the insulated covering of such a wire is not injured, it is impossible to feel any sensation whatsoever, let alone a shock. To prevent injury to such wires they should never be allowed to "kink," or bend at too great an angle, for such treatment injures the covering, and so breaks down the "insulation" which is so essential. When such wires become worn from constant use it is best to renew them. The expense is small.

Another class of people fear to install electricity in their houses for fear of fire. But, if electricity is distributed from a well designed and properly installed system of wiring, there is no danger.

The Best Methods of Wiring a House.

There are in addition to other methods, two which stand pre-eminently the best as regards safety. One of these is to enclose the wiring in a pipe. This is an excellent way, for if at any time in the future it is necessary to use new wire, it may be inserted in the pipe without the trouble and expense of removing floors, walls, etc., which would be required with the other usual methods. No rats or mice can injure the insulated covering of the wires thus enclosed and the greatest degree of safety is obtained by its use. No danger of fire is attendant with such protection.

Another very desirable method is to use a wire coil covered on the outside with what is known as "steel armored" covering. This again protects them from attacks of rats and mice, and surely guards the insulation. Such wiring is especially nice to use when an electric lighting system is being installed in an old house, for it is very flexible, and can be run in any desired direction with no difficulty. Again, as in the "pipe" method, there is no danger from fire.

It is important to have all wires, switches, etc., of a large enough capacity to carry safely the required current for the number of lights, fans, etc., which are connected with them. Such matters should be carefully looked into when planning, and the owner should decide beforehand what he will need.

A competent electrical contractor should alone be employed. In some places laws have been passed, and in others they are being formulated, making it necessary for electricians to pass an examination to determine if they are competent to install electric wiring for lighting or power, or in fact any purpose whatsoever. But even with such a contractor it is necessary to have a distinct understanding how the wiring is to be put in, for as I mentioned before, there are a number of ways it may be done.

What a Householder Should Know Concerning the Care of Electrical Apparatus in His Home.

There are a number of points which each user of electricity should know about.

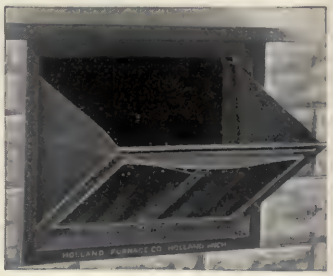
Each member of the household should



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know how to turn off the entire supply of electricity from the house. A switch to do this is generally located at the point where the meter is placed. This is usually in the cellar. Whenever the house is left unoccupied for even one night the supply of current should be cut off. It takes but a minute to do so.

It is the poorest economy to use old lamps. Often I find people using lamps which have become blackened from constant burning. The amount of light an old lamp will give is much less than that which a new one will. Many companies supplying electricity exchange old lamps for new ones at intervals. While it costs them money to do so, their patrons do not become displeased with the electric light, as they are almost sure to do if old lamps are burned. The above applies to lamps with "carbon" filaments, which are now being largely replaced by lamps with metal filaments.

Many installations have a lamp and porcelain shade suspended by flexible wires from the ceiling. Never under any circumstances attach such wires to anything made of metal. Often I find people who desire to move such a lamp in order to have the light it gives in a slightly different place. Let me give the following example which may be considered typical. An occupant of a hotel room desired to have a lamp suspended in such a manner as has just been described moved a few feet in order that he might read with comfort while lying on a lounge. He did so by fastening an iron hook in the ceiling, and twisting the wires around it. In time the installation at this point became worn off, and the bare wires touched one another, with the result that they melted, and allowed the lamp and shade to fall upon the reader, narrowly missing his face. If the lamp had struck him in the eye, a serious accident might have occurred. I have known the wires leading from similar lamps to be attached to metal beds and like accidents to occur. In addition to the danger from the falling lamp and shade, a "short circuit" is formed where the wires melt; and the danger from fire is great. It is important for the householder to know what a "short circuit" is. Briefly, whenever the electricity is not allowed to travel on its regular path, it can return to its source by a shorter way, a "short circuit" is formed. In the instance of the falling lamp, the current did not pass through the lamp, but took a more direct route back to the dynamo. Whenever this happens an "arc" or flame is formed, and inflammable material may easily be set on fire by it. But if care is used in purchasing only the best wire, fixtures, etc., and also if they are handled in a proper manner, no such accident can take place.

Never place inflammable material around an electric lamp. A favorite method of some people to subdue the light is to cover the lamp with tissue paper. Many fires have been started in this manner. It should be remembered that considerable heat is generated when an electric lamp is burning, and that when this is confined (as it is when the lamp is covered tightly) it will cause any material not fireproof to ignite. The light should be reduced by using a lamp of smaller candle power. Ordinary sizes are sixteen, thirty-two and fifty candle power. But others are now made which will "turn down," that is, the degree of light may be varied.

Fires have been occasioned by leaving the current turned on an electric iron when it is not in use. To prevent this, the writer advises that an ordinary switch alone should not be used to turn the electricity on and off an electric iron, but that a removable "plug cut out" or "screw plug" be employed in addition. It should be remembered in this connection that unlike an electric light which shows by the illumination that the current is on, or an electric fan which moves whenever electricity is supplied to it, and lets the user know that it is in operation, an electric iron does not show the eye of the user that any electricity is passing through it. Therefore the flexible wires connecting the supply "plug" or electric light socket with the iron, should always be entirely disconnected in addition to turning off the ordinary switch. It is best to disconnect all heating apparatus in this manner, for it must be remembered that any apparatus which does not show visibly that it is in operation, should be carefully handled.



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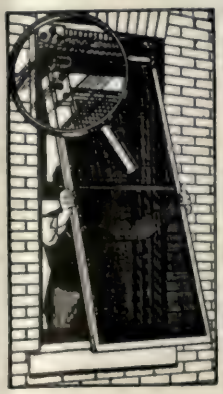
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Brick Veneer.

A BRICK veneer house has some advantages and many disadvantages. Among the first are—that it can be constructed more cheaply than one of solid brick; that an air space is provided between the brick and the sheeting, thus making the building cooler in summer and warmer in winter; that a protection is afforded against fire from adjoining buildings; that painting is not a necessity, and its appearance makes it look well to an investor, especially one who is not familiar with building construction.

A new building, brick veneer, is satisfactory in many ways. A provision is generally made to support the weight of the walls, the window frames are made one inch wider to allow for the air space, heavier sheeting is used, and there is good opportunity to apply easily and quickly the metal ties or clips that ought to be used every fifth course to tie the brick work to the sheeting, and there is no excuse for the courses not to be level and the corners plumb.

Among the disadvantages of brick veneer are: It is deceptive; it does not support any of the constructional parts of the building; it does not afford any protection from an interior fire, and the cost of repairing any such damage would be materially increasing. Veneering an old frame house is generally an unsatisfactory job for many reasons. At the time of erection no provision was made to carry the extra weight, as in a frame building the weather boarding and framing is carried to the outside of the basement or cellar walls. Then the building has settled in parts and angles and corners are out of plumb, and the bricklayer has his own troubles. He is also forced to nail his clips to the sheeting, and as this is an awkward job for him the number used is liable to be greatly reduced. If a stone window sill is used, the weight is too much for a single brick course, and the result is either a cracked sill or a badly settled one. Then the cutting out of the old sill and sub-sill and making a good job require considerable time on the part of a carpenter, and in a majority of cases the results are not satisfactory. Clay Worker.

The Wide Mortar Joint in Modern Brick Work.

The mortar joint, as a factor in the production of a beautiful brick wall, has not received the consideration in the past which its great importance warrants, and it is with a view of inspiring a greater interest in this important detail that the writer respectfully presents the following discussion.

With the narrow mortar joint which has been in vogue in this country in the past, the composition of the mortar and the finish of its surface are, from an aesthetic standpoint, of little moment; with the rapidly increasing use of the wide mortar joint, they become matters of vital importance.

One has but to look about him to see numberless instances where the mortar joint has well-nigh ruined an otherwise good piece of brickwork.

Composition of the Mortar.

For narrow joints, a mortar made of fine sand, cement and lime answers all the requirements fairly well. For a wide joint, such mortar is wholly unsatisfactory; it is soft and pasty, squeezes out of the joint before it is set—(due to the weight of the brick), smears the face of the wall and usually ruins the work.

Mortar for a wide joint, that is to say ⅜ of an inch or more, should contain a liberal proportion of fine pebbles known to the trade as "grit," good coarse sand, Portland cement, a small amount of lime putty (or hydrated lime), and whatever coloring matter is desired.

Bricklayers, who are accustomed to the use of fine mortar only, almost in-

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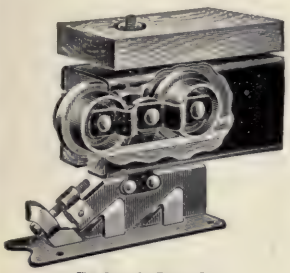
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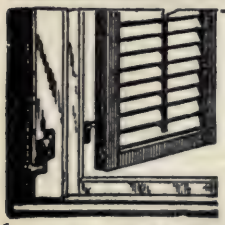


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variably object to the wide mortar joint, often claiming that brick cannot be thus laid economically. Experience has shown, however, in the case of hundreds of structures erected with a wide mortar joint during the last three years, that all difficulties vanish with the use of proper materials and a proper method of mixing. Moreover, it has been thoroughly demonstrated that brick can be laid with a wide joint of proper mortar quite as rapidly and economically as with a narrow joint; in fact, much testimony goes to show that the wide joint is the cheaper of the two.

Color of Motar Used.

Generally speaking, we strongly recommend that the mortar joint be finished as follows:

For red or brown brick with cream gray mortar, the joint should be "rough cut flush"; in the case of the dark brownish red mortar, the joint should be "raked out" to cast a shadow.

Experience has shown that a rough cut mortar joint is very undesirable with gray brick, as the brick and the joint are so nearly the same color and texture that the wall loses character and looks like a monotonous cement surface. The joint should, therefore, be raked out to cast a shadow and accentuate the joint.

With bricks of the golden group, unless a distinctly white joint is used, thereby setting out each brick distinctly, the joints should be raked out as in the case of the gray brick.

Generally speaking, we recommend for "Tapestry" or other similar rough texture bricks of the red or brown colors, a cream gray mortar mixed as per formula "B." For bricks of the gray colors a very dark gray mortar mixed according to formula "K;" and for bricks of the golden and tan colors either the cream gray mortar "J" or the dark gray mortar "K." American Car and Builder.

Tile Floors.

In recent years the old-fashioned tile pavement has come into great favor, particularly the large, dark red squares known as Welsh tiles. To support such a flooring on a house built of masonry is no great problem, for the necessary bed of concrete rests securely on a masonry arch as some form of terra-cotta construction. But where a tiled conservatory or porch or dining room is desired in a frame house, how to support the concrete bed on which the tiles are laid is a matter for considerable care. It is best done by having rough boards cut in between the floor beams and resting on seven-eighths-inch strips nailed to the sides of the beams. The tops of these boards must be at least four inches below the finished floor line, and better still five inches, to allow of a concrete bed of sufficient thickness. A thin one would surely crack. The tops of the beams should be beveled off to an edge in the center.

Where a tile floor is put into an old building during alterations further care must be taken to cover the rough boarding and the beams with waterproof paper to keep the moisture from discoloring the ceiling below. Where the tiles are for an exterior porch, under which there is no excavating, it is best to build a brick retaining wall as foundation for the porch, fill the enclosure with sand, bring it to a level and spread on it an eight-inch bed of concrete for the tiling. This all sounds troublesome, but one is well repaid by the stability and permanence of a properly laid tile floor.—House Beautiful.

Northfield Mixer.

About two years ago a Western bridge builder devised a light batch concrete mixer for his own use, which worked so satisfactorily that it was put on the market as the Northfield mixer by the Northfield (Minn.) Iron Co. Its use has been extended from concrete to mortar, surfacing and plaster. The Great Northern Bridge Co., of Minneapolis, recently ordered 10 of these mixers after a trial of one on two jobs under different foremen; the Fargo Bridge & Iron Co., of Fargo, N. D., sent in a repeat order a short time ago, and builders in Ohio have purchased a large number on rush orders, some of them directing the mixers to be sent by express, something which is not so extraordinary as it seems at first because the mixer is not heavy.—Cement & Eng. News.

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New Booklets and Trade Notes



IT is seldom that such artistic and attractive publications come to our table as the books and catalog of designs sent to us by the National Fireproofing Co., Pittsburg, Pa., manufacturers of Natco Hollow Tile. The two publications are individual in character. The Natco House, with its charming cover in color, being devoted principally to the presentation of a series of designs for a small house, to be built of Natco Tile, the designs having been submitted in competition by well known architectural draughtsmen.

The competition was given to encourage the building of a better class of small houses, the cost being limited to $6,000, Natco Tile the material to be used in construction. To say that these designs are of unusual interest and artistic merit, as well as meeting the requirements of durability and practicability, is very moderate praise. Keiths Magazine will take pleasure in reproducing some of these designs in future issues.

Part of this book, as also one entitled **Fireproof Houses of Natco Hollow Tile,** and How to Build Them—is devoted to illustrations of houses which have been completed from this material during the past year, and are but a few examples of many hundreds.

* * *

The Wagner Manufacturing Co., Cedar Falls, Ia., send us their catalog No. 12, illustrating their specialties in Door Hangers and Tracks, with prices for the different sized openings. The several detailed parts are shown and their working described.

Stainless Cement Company to Abandon Present Plant.

The Blanc Stainless Cement Co., of Allentown, Pa., has suspended business at its present location. The company made white cement and was organized seven years ago by J. Maxwell Carrere, brother of John M. Carrere, the famous New York architect. The Allentown plant to make white cement was an experimental undertaking from an artistic standpoint and it is the intention of the company to establish a new and larger plant at a point closer to raw material. Mr. Carrere, who is a graduate of the Columbia School of Mines, is satisfied that with the development of the industry the white cement will largely displace plaster on account of its superior quality and cheapness.

* * * *

We have received from the Wiggins Fabrikona Co., Bloomfield, N. J., samples of their new wall fabric—Shadow-Kona. This beautiful hanging is a lighter and more flexible fabric than burlap, and the shades of color are extremely soft, blending harmoniously with the soft tones of fumed oak or pleasing contrast backgrounds. Their particular feature is a slight glint of gold running through the fabric, which while not in the least gaudy or showy, lightens up a dull interior and adds interest. Samples sent on request.

* * * *

The Keystone Varnish Co., Brooklyn, N. Y., send us their latest word on washable wall finishes, which they have named Keystona. Homebuilders will find their booklet describing this and kindred manufactures of interest.

* * * *

The Ironite Co., Chicago, claim great superiority for their product—Ironite flooring, designed for special use in factories, warehouses or garages, and other places where heavy wear is encountered.

* * * *

The United States Radiator Co., Detroit, Mich., send out a booklet with a fetching cover, showing a young mother warming the baby's feet at one of their radiators. The text is further illustrated by unusually dainty and beautiful halftones, and presents the subject of proper

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heating facilities in a forceful manner. The little history of the various systems of heating and comparison of their methods and results is both interesting and instructive. Sent on request.

* * *

The same company also sends us several attractive booklets setting forth the United States Vacuum Cleaners, with an especially dainty one entitled, How to Buy a Vacuum Cleaner—with text furnished by Carl D. Bushnell, Mechanical Engineer. It presents the important principles of vacuum cleaning in a lucid and comprehensive manner. This series of fine booklets is sent to any one desiring them on request from Dept. A, United States Radiator Co., Detroit, Mich.

* * *

An illuminating booklet is issued by the C. A. Dunham Co., Marshalltown, Ia., called Purchaser's Guide. It discusses, in the form of a conversation between an architect, his client and a salesman, every point, pro and con, concerning radiator traps, their functions and faults, or in other words: First, What a Radiator Trap is For in a Heating System, and Second, Things to Look for and Things to Avoid.

* * *

The October **Spectrum,** in a cover of the new mulberry shade now so popular, shows its accustomed up-to-dateness in keeping in touch with the latest ideas and fancies in house decoration. The color plate in the center of the booklet, showing a mission library in green, is a felicitous combination and use of their Flat Tone tints.

The clever satire at the end, which they reproduce from the Harvard Lampoon, adds spice to the issue.

"Cement User" is the title of an interesting little publication devoted to the interests of the country contractor, the farmer, the home owner and the smaller user of concrete, which has just been launched by the Chicago Portland Cement Company, Chicago, Ill. The major portion of the first issue of this little work is devoted to "The Farm of the Future" and in connection with the matter is to be found illustrations of concrete models of various buildings usually found upon an up-to-date farm. The cover design is particularly interesting, being printed in colors and representing three men at work in laying a cement walk leading up to a country mansion which occupies a portion of the background.

* * *

The "Imperishable Silo," manufactured from patented vitrified clay blocks, is the subject of an interesting pamphlet sent out by the National Fireproofing Company, Fulton building, Pittsburgh, Pa. Silos constructed according to directions given within the covers of this little work are substantial and durable and are guaranteed for a period of two years against any and all loss or damage which may be due to the cracking or breaking of the silo as a result of ensilage pressure or from the silo being blown down or damaged by winds, except damage to the roof. Among the descriptive text are suggestions as to size of silo to select and there is a table showing sizes and capacities of silos of varying diameter.

* * *

The Pittsburg Air-Tight Metal Door Sill Co. announce a new threshold device, made of Solid Drawn Brass. Samples will be sent prepaid, upon request. Pittsburg, Pa.



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